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PASSWORD:

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* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	JAN 02	STN pricing information for 2008 now available
NEWS	3	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	4	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS	5	JAN 28	MARPAT searching enhanced
NEWS	6	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS	7	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS	8	JAN 28	MEDLINE and LMEEDLINE reloaded with enhancements
NEWS	9	FEB 08	STN Express, Version 8.3, now available
NEWS	10	FEB 20	PCI now available as a replacement to DPCI
NEWS	11	FEB 25	IFIREF reloaded with enhancements
NEWS	12	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS	13	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification
NEWS	14	MAR 31	IFICDB, IFIPAT, and IFIUDB enhanced with new custom IPC display formats
NEWS	15	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS	16	MAR 31	CA/Caplus and CASREACT patent number format for U.S. applications updated
NEWS	17	MAR 31	LDPCI now available as a replacement to LDPCI
NEWS	18	MAR 31	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	19	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	20	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	21	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	22	APR 28	IMSRESEARCH reloaded with enhancements
NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008			
NEWS HOURS	STN Operating Hours Plus Help Desk Availability		
NEWS LOGIN	Welcome Banner and News Items		
NEWS IPC8	For general information regarding STN implementation of IPC 8		

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 09:13:12 ON 20 MAY 2008

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Uploading

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=> FILE REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 09:13:40 ON 20 MAY 2008

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 19 MAY 2008 HIGHEST RN 1021481-05-9

DICTIONARY FILE UPDATES: 19 MAY 2008 HIGHEST RN 1021481-05-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

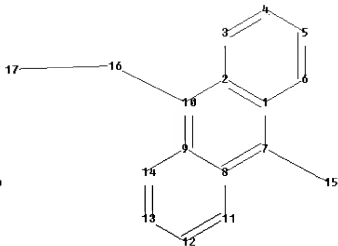
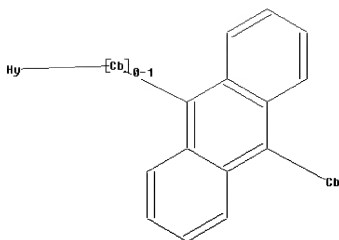
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

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Uploading C:\Program Files\STNEXP\Queries\10563353\10563353.str



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15 16 17
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
7-15 10-16 16-17
ring bonds :
1-2 1-6 1-7 2-3 2-10 3-4 4-5 5-6 7-8 8-9 8-11 9-10 9-14 11-12 12-13
13-14
exact/norm bonds :
16-17
exact bonds :
7-15 10-16
normalized bonds :
1-2 1-6 1-7 2-3 2-10 3-4 4-5 5-6 7-8 8-9 8-11 9-10 9-14 11-12 12-13
13-14

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Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom

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L1 STRUCTURE UPLOADED

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SAMPLE SEARCH INITIATED 09:13:57 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 24129 TO ITERATE

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8.3% PROCESSED      2000 ITERATIONS      4 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

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FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH  **COMPLETE**
PROJECTED ITERATIONS:   473284 TO 491876
PROJECTED ANSWERS:      549 TO 1381

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L2 4 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 09:14:02 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 484919 TO ITERATE

100.0% PROCESSED 484919 ITERATIONS 960 ANSWERS
SEARCH TIME: 00.00.12

L3 960 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 178.36 178.57

FILE 'CAPLUS' ENTERED AT 09:14:23 ON 20 MAY 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 20 May 2008 VOL 148 ISS 21
FILE LAST UPDATED: 19 May 2008 (20080519/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> s l3 and dev/rl
288 L3
790747 DEV/RL
L4 119 L3 AND DEV/RL

=> s l4 and py<=2004
25083671 PY<=2004
L5 57 L4 AND PY<=2004

=> s l5 and white
289393 WHITE
3598 WHITES
290857 WHITE
(WHITE OR WHITES)
L6 3 L5 AND WHITE

=> d l6 1-3 ibib hitstr

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:1036500 CAPLUS Full-text
DOCUMENT NUMBER: 142:13502

TITLE: White light-emitting device structures
containing naphthacene derivative

INVENTOR(S): Hatwar, Tukaram K.

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: U.S. Pat. Appl. Publ., 33 pp., Cont.-in-part of U.S.
Ser. No. 446436, abandoned.
CODEN: USXXCO

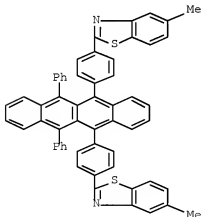
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

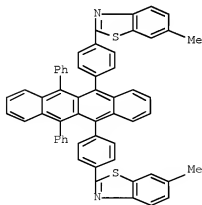
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US 20040241491	A1	20041202	US 2003-657626	20030908 <--
US 7037601	B2	20060502		
WO 2004107471	A1	20041209	WO 2004-US12004	20040419 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			US 2003-446436	B2 20030528
			US 2003-657626	A 20030908
IT 478799-67-6				
RL: DEV (Device component use); USES (Uses)				
(White light-emitting device structures containing naphthacene derivative)				
RN 478799-67-6 CAPLUS				
CN Benzothiazole, 2,2'-[(6,11-diphenyl-5,12-naphthacenediyl)di-4,1-phenylene]bis[5-methyl- (9CI) (CA INDEX NAME)]				



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:780190 CAPLUS Full-text
 DOCUMENT NUMBER: 141:285561
 TITLE: White light-emitting device having a blue
 light-emitting layer doped with an
 electron-transporting or a hole-transporting material
 INVENTOR(S): Hatwar, Tukaram K.; Ricks, Michele L.; Winters,
 Dustin; Spindler, Jeffrey P.
 PATENT ASSIGNEE(S): Eastman Kodak Company, USA
 SOURCE: U.S. Pat. Appl., 26 pp., Cont.-in-part of U.S.
 Ser. No. 391,727, abandoned.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040185300	A1	20040923	US 2003-606446	20030626 <--
US 6967062	B2	20051122		
EP 1492167	A2	20041229	EP 2004-76759	20040614 <--
EP 1492167	A3	20050126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
KR 2005001426	A	20050106	KR 2004-47832	20040624
JP 2005019413	A	20050120	JP 2004-190012	20040628
PRIORITY APPLN. INFO.:			US 2003-391727	B2 20030319
			US 2003-606446	A 20030626
IT 478799-44-9				
RL: DEV (Device component use); MOA (Modifier or additive use);				
PRP (Properties); USES (Uses)				
(white light-emitting device having blue light-emitting layer doped with electron-transporting or hole-transporting material)				
RN 478799-44-9 CAPLUS				
CN Benzothiazole, 2,2'-[(6,11-diphenyl-5,12-naphthacenediyl)di-4,1- phenylene]bis[6-methyl- (CA INDEX NAME)]				

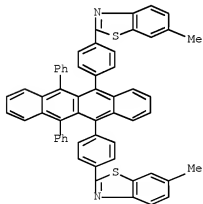


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:252040 CAPLUS Full-text
 DOCUMENT NUMBER: 140:311689
 TITLE: White organic light-emitting devices with improved performance
 INVENTOR(S): Hatwar, Tukaram K.
 PATENT ASSIGNEE(S): Eastman Kodak Company, USA
 SOURCE: U.S. Pat. Appl. Publ., 34 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040058193	A1	20040325	US 2002-244314	20020916 <--
JP 2004134396	A	20040430	JP 2003-323021	20030916 <--
CN 1496208	A	20040512	CN 2003-158687	20030916 <--
PRIORITY APPLN. INFO.: OTHER SOURCE(S): MARPAT 140:311689			US 2002-244314	A 20020916

IT 478799-44-9
 RL: DEV {Device component use}; MOA (Modifier or additive use);
 USES (Uses)
 (yellow emitting dopant; white organic light-emitting devices using super rubrenes organic yellow emitting material with improved performance)
 RN 478799-44-9 CAPLUS
 CN Benzothiazole, 2,2'-[(6,11-diphenyl-5,12-naphthacenediyl)di-4,1-phenylene]bis[6-methyl- (CA INDEX NAME)]



=> d hi
 'HI' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB
 ALL ----- BIB, AB, IND, RE

APPS ----- AI, PRAI
 BIB ----- AN, plus Bibliographic Data and PI table (default)
 CAN ----- List of CA abstract numbers without answer numbers
 CBIB ----- AN, plus Compressed Bibliographic Data
 CLASS ----- IPC, NCL, ECLA, FTERM
 DALL ----- ALL, delimited (end of each field identified)
 DMAX ----- MAX, delimited for post-processing
 FAM ----- AN, PI and PRAI in table, plus Patent Family data
 FBIB ----- AN, BIB, plus Patent FAM
 IND ----- Indexing data
 IPC ----- International Patent Classifications
 MAX ----- ALL, plus Patent FAM, RE
 PATS ----- PI, SO
 SAM ----- CC, SX, TI, ST, IT
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
 SCAN must be entered on the same line as the DISPLAY,
 e.g., D SCAN or DISPLAY SCAN)
 STD ----- BIB, CLASS

 IABS ----- ABS, indented with text labels
 IALL ----- ALL, indented with text labels
 IBIB ----- BIB, indented with text labels
 IMAX ----- MAX, indented with text labels
 ISTD ----- STD, indented with text labels

 OBIB ----- AN, plus Bibliographic Data (original)
 OIBIB ----- OBIB, indented with text labels

 SBIB ----- BIB, no citations
 SIBIB ----- IBIB, no citations

 HIT ----- Fields containing hit terms
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
 containing hit terms
 HITRN ----- HIT RN and its text modification
 HITSTR ----- HIT RN, its text modification, its CA index name, and
 its structure diagram
 HITSEQ ----- HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and
 its structure diagram
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 KWIC ----- Hit term plus 20 words on either side
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.

ENTER DISPLAY FORMAT (BIB):
 ENTER DISPLAY FORMAT (BIB):end

=> d his

(FILE 'HOME' ENTERED AT 09:13:12 ON 20 MAY 2008)

FILE 'REGISTRY' ENTERED AT 09:13:40 ON 20 MAY 2008

L1 STRUCTURE UPLOADED
L2 4 S L1 SSS SAM
L3 960 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 09:14:23 ON 20 MAY 2008

L4 119 S L3 AND DEV/RL
L5 57 S L4 AND PY<=2004
L6 3 S L5 AND WHITE

=> s 15 not 16
L7 54 L5 NOT L6

=> s 17 and anthracene
56430 ANTHRACENE
2393 ANTHRACENES
57076 ANTHRACENE
(ANTHRACENE OR ANTHRACENES)
L8 21 L7 AND ANTHRACENE

=> d 18 1-21 ibib hitstr

L8 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:878010 CAPLUS Full-text

DOCUMENT NUMBER: 141:372558

TITLE: Organic light-emitting devices with azole
derivative-containing charge transport layers and
electron transport materials based on azole
derivatives

INVENTOR(S): Aziz, Hany; Vamvounis, George; Hu, Nan-Xing; Popovic,
Zoran D.; Coggan, Jennifer A.

PATENT ASSIGNEE(S): Xerox Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20040209117	A1	20041021	US 2003-702859	20031106 <--
US 7291404	B2	20071106		
CA 2425797	A1	20041017	CA 2003-2425797	20030417 <--
			US 2003-463312P	P 20030417

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 141:372558

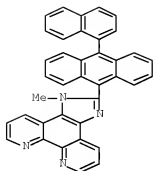
IT 777905-99-4

RL: DEV (Device component use); USES (Uses)

(organic light-emitting devices with azole derivative-containing charge
transport layers and electron transport materials based on azole derivs.)

RN 777905-99-4 CAPLUS

CN 1H-Imidazo[4,5-f][1,10]phenanthroline, 1-methyl-2-[10-(1-naphthalenyl)-9-anthracenyl]- (CA INDEX NAME)



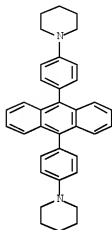
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:756795 CAPLUS Full-text
 DOCUMENT NUMBER: 141:285537
 TITLE: Organic electroluminescent device employing a derivative of 9,10-diaminoanthracene as a green luminescent dopant
 INVENTOR(S): Seo, Jeong Dae; Kim, Hee Jung; Lee, Kyung Hoon; Oh, Hyoung Yun; Kim, Myung Seop; Park, Chun Gun
 PATENT ASSIGNEE(S): LG Electronics Inc., S. Korea
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004078872	A2	20040916	WO 2004-KR472	20040305 <--
WO 2004078872	A3	20041216		
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KR 2004079803	A	20040916	KR 2003-20468	20030401 <--
US 20040209118	A1	20041021	US 2004-792130	20040304 <--
EP 1603990	A2	20051214	EP 2004-717900	20040305
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CN 1771313	A	20060510	CN 2004-80009251	20040305
JP 2006519477	T	20060824	JP 2006-500655	20040305
PRIORITY APPLN. INFO.:			KR 2003-13700	A 20030305
			KR 2003-20468	A 20030401
			WO 2004-KR472	W 20040305

OTHER SOURCE(S): MARPAT 141:285537
 IT 722498-62-6
 RL: DEV {Device component use}; USES (Uses)

(light-emitting host; organic electroluminescent device employing derivative of 9,10-diaminoanthracene as green luminescent dopant)
 RN 722498-62-6 CAPLUS
 CN Piperidine, 1,1'-(9,10-anthracenediyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



L8 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:681260 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 141:215358
 TITLE: Organic electroluminescent device
 INVENTOR(S): Seo, Jeong Dae; Kim, Hee Jung; Lee, Kyung Hoon; Oh, Hyoung Yun; Kim, Myung Seop; Park, Chun Gun
 PATENT ASSIGNEE(S): LG Electronics Inc., S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 19 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040161633	A1	20040819	US 2004-779875	20040218 <--
WO 2004075603	A2	20040902	WO 2004-KR342	20040219 <--
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JP 2006518545	T	20060810	JP 2006-500648	20040219
KR 2005095653	A	20050929	KR 2005-715181	20050818
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			WO 2004-KR342	W 20040219

OTHER SOURCE(S): MARPAT 141:215358

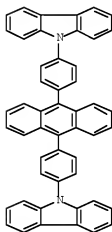
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 741255-77-6 741255-78-7 741255-82-3
 741255-86-9 741255-89-0 741255-97-0
 741255-99-2 741256-02-0 741256-05-3
 741256-08-6 741256-09-7

RL: DEV (Device component use); USES (Uses)

(organic electroluminescent devices with 9,10-anthracene
 derivative-based hole-blocking layers)

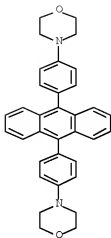
RN 194296-19-0 CAPLUS

CN 9H-Carbazole, 9,9'-(9,10-anthracenediyl-di-4,1-phenylene)bis- (CA INDEX
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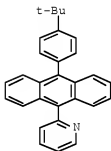


RN 741255-51-6 CAPLUS

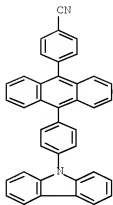
CN Morpholine, 4,4'-(9,10-anthracenediyl-di-4,1-phenylene)bis- (9CI) (CA
 INDEX NAME)



RN 741255-57-2 CAPLUS
 CN Pyridine, 2-[10-[4-(1,1-dimethylethyl)phenyl]-9-anthracenyl]- (CA INDEX NAME)

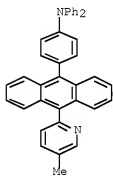


RN 741255-64-1 CAPLUS
 CN Benzonitrile, 4-[10-[4-(9H-carbazol-9-yl)phenyl]-9-anthracenyl]- (CA INDEX NAME)



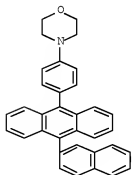
RN 741255-68-5 CAPLUS

CN Benzenamine, 4-[10-(5-methyl-2-pyridinyl)-9-anthracenyl]-N,N-diphenyl-
(CA INDEX NAME)



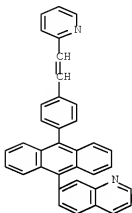
RN 741255-71-0 CAPLUS

CN Morpholine, 4-[4-[10-(2-naphthalenyl)-9-anthracenyl]phenyl]- (CA INDEX
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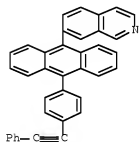


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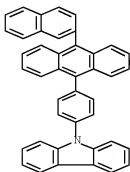
CN Quinoline, 7-[10-[4-[2-(2-pyridinyl)ethenyl]phenyl]-9-anthracenyl]- (CA
INDEX NAME)



RN 741255-73-2 CAPLUS
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NAME)

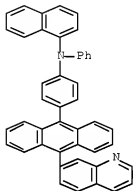


RN 741255-76-5 CAPLUS
CN 9H-Carbazole, 9-[4-[10-(2-naphthalenyl)-9-anthracenyl]phenyl]- (CA INDEX
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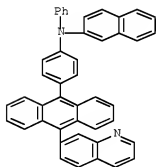
RN 741255-77-6 CAPLUS

CN 1-Naphthalenamine, N-phenyl-N-[4-[10-(7-quinolinyl)-9-anthracenyl]phenyl]-
(CA INDEX NAME)



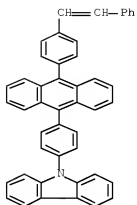
RN 741255-78-7 CAPLUS

CN 2-Naphthalenamine, N-phenyl-N-[4-[10-(7-quinolinyl)-9-anthracenyl]phenyl]-
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RN 741255-82-3 CAPLUS

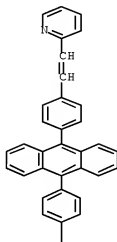
CN Morpholine, 4-[4-[10-[4-[2-(2-pyridinyl)ethenyl]phenyl]-9-anthracenyl]phenyl]- (CA INDEX NAME)



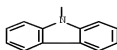
RN 741255-97-0 CAPLUS

CN 9H-Carbazole, 9-[4-[10-[4-[2-(2-pyridinyl)ethenyl]phenyl]-9-anthracenyl]phenyl]- (CA INDEX NAME)

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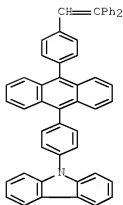
PAGE 2-A



RN 741255-99-2 CAPLUS

CN 9H-Carbazole, 9-[4-[10-[4-(2,2-diphenylethenyl)phenyl]-9-anthracenyl]phenyl]-

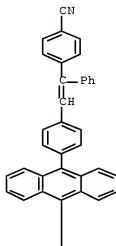
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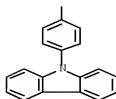
RN 741256-02-0 CAPLUS

CN Benzonitrile, 4-[2-[4-[10-[4-(9H-carbazol-9-yl)phenyl]-9-anthracenyl]phenyl]-1-phenylethenyl]- (CA INDEX NAME)

PAGE 1-A

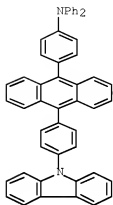


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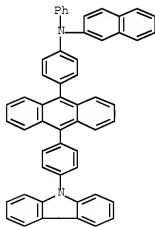
RN 741256-05-3 CAPLUS

CN Benzenamine, 4-[10-[4-(9H-carbazol-9-yl)phenyl]-9-anthracenyl]-N,N-diphenyl- (CA INDEX NAME)



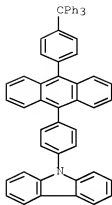
RN 741256-08-6 CAPLUS

CN 2-Naphthalenamine, N-[4-[10-[4-(9H-carbazol-9-yl)phenyl]-9-anthracenyl]phenyl]-N-phenyl- (CA INDEX NAME)



RN 741256-09-7 CAPLUS

CN 9H-Carbazole, 9-[4-[10-[4-(triphenylmethyl)phenyl]-9-anthracenyl]phenyl]- (CA INDEX NAME)



L8 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:681259 CAPLUS Full-text

DOCUMENT NUMBER: 141:215357

TITLE: Organic electroluminescent device and method for fabricating the same

INVENTOR(S): Seo, Jeong Dae; Kim, Hee Jung; Lee, Kyung Hoon; Oh, Hyoung Yun; Kim, Myung Seop; Park, Chun Gun

PATENT ASSIGNEE(S): LG Electronics Inc., S. Korea

SOURCE: U.S. Pat. Appl. Publ., 20 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040161632	A1	20040819	US 2004-779874	20040218 <--
WO 2004075604	A2	20040902	WO 2004-KR343	20040219 <--
WO 2004075604	A3	20041111		
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RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1595295	A2	20051116	EP 2004-712771	20040219
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
CN 1751400	A	20060322	CN 2004-80004644	20040219
JP 2006518535	T	20060810	JP 2006-500649	20040219
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PRIORITY APPLN. INFO.:			KR 2003-10394	A 20030219
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IT 194296-19-0	741255-51-6	741255-57-2		
	741255-64-1	741255-68-5		
	741255-72-1	741255-73-2		
	741255-77-6	741255-78-7		
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741255-99-2 741256-02-0 741256-05-3

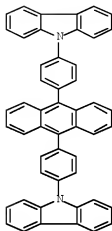
741256-08-6 741256-09-7

RL: DEV (Device component use); USES (Uses)

(multicolor-emitting organic electroluminescent devices with hole-blocking layers and their fabrication)

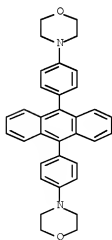
RN 194296-19-0 CAPLUS

CN 9H-Carbazole, 9,9'-(9,10-anthracenediyldi-4,1-phenylene)bis- (CA INDEX NAME)



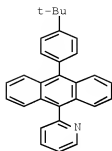
RN 741255-51-6 CAPLUS

CN Morpholine, 4,4'-(9,10-anthracenediyldi-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

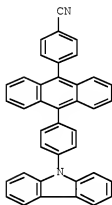


RN 741255-57-2 CAPLUS

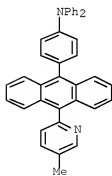
CN Pyridine, 2-[10-[4-(1,1-dimethylethyl)phenyl]-9-anthracenyl]- (CA INDEX NAME)



RN 741255-64-1 CAPLUS
 CN Benzonitrile, 4-[10-[4-(9H-carbazol-9-yl)phenyl]-9-anthracenyl]- (CA INDEX NAME)

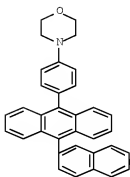


RN 741255-68-5 CAPLUS
 CN Benzenamine, 4-[10-(5-methyl-2-pyridinyl)-9-anthracenyl]-N,N-diphenyl- (CA INDEX NAME)



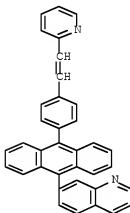
RN 741255-71-0 CAPLUS

CN Morpholine, 4-[4-[10-(2-naphthalenyl)-9-anthracenyl]phenyl]- (CA INDEX NAME)



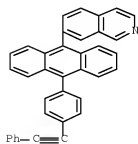
RN 741255-72-1 CAPLUS

CN Quinoline, 7-[10-[4-[2-(2-pyridinyl)ethenyl]phenyl]-9-anthracenyl]- (CA INDEX NAME)



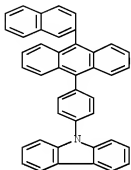
RN 741255-73-2 CAPLUS

CN Isoquinoline, 7-[10-[4-(2-phenylethynyl)phenyl]-9-anthracenyl]- (CA INDEX NAME)



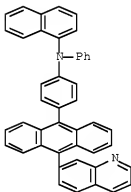
RN 741255-76-5 CAPLUS

CN 9H-Carbazole, 9-[4-[10-(2-naphthalenyl)-9-anthracenyl]phenyl]- (CA INDEX NAME)



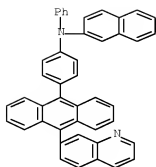
RN 741255-77-6 CAPLUS

CN 1-Naphthalenamine, N-phenyl-N-[4-[10-(7-quinoliny)-9-anthracenyl]phenyl]- (CA INDEX NAME)



RN 741255-78-7 CAPLUS

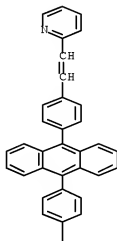
CN 2-Naphthalenamine, N-phenyl-N-[4-[10-(7-quinoliny)-9-anthracenyl]phenyl]- (CA INDEX NAME)



RN 741255-82-3 CAPLUS

CN Morpholine, 4-[4-[10-[4-(2-(2-pyridinyl)ethenyl)phenyl]-9-anthracenyl]phenyl]- (CA INDEX NAME)

PAGE 1-A

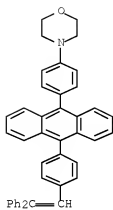


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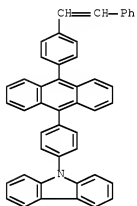
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CN Morpholine, 4-[4-[10-[4-(2,2-diphenylethenyl)phenyl]-9-anthracenyl]phenyl]- (CA INDEX NAME)



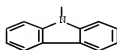
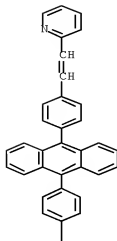
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CN 9H-Carbazole, 9-[4-[10-[4-(2-phenylethenyl)phenyl]-9-anthracenyl]phenyl]-
(CA INDEX NAME)



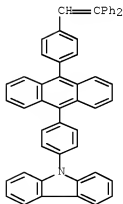
RN 741255-97-0 CAPLUS

CN 9H-Carbazole, 9-[4-[10-[4-[2-(2-pyridinyl)ethenyl]phenyl]-9-anthracenyl]phenyl]-
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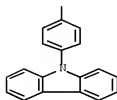
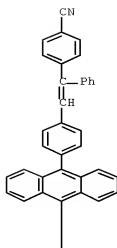
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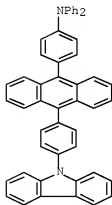
RN 741256-02-0 CAPLUS

CN Benzonitrile, 4-[2-[4-[10-[4-(9H-carbazol-9-yl)phenyl]-9-anthracenyl]phenyl]-1-phenylethenyl]- (CA INDEX NAME)



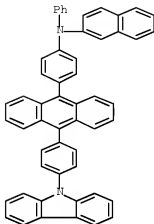
RN 741256-05-3 CAPLUS

Benzenamine, 4-[10-[4-(9H-carbazol-9-yl)phenyl]-9-anthracenyl]-N,N-diphenyl- (CA INDEX NAME)



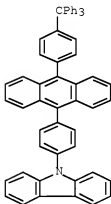
RN 741256-08-6 CAPLUS

CN 2-Naphthalenamine, N-[4-[10-[4-(9H-carbazol-9-yl)phenyl]phenyl]-9-anthracenyl]phenyl-N-phenyl- (CA INDEX NAME)



RN 741256-09-7 CAPLUS

CN 9H-Carbazole, 9-[4-[10-[4-(triphenylmethyl)phenyl]phenyl]-9-anthracenyl]phenyl]- (CA INDEX NAME)



L8 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:651310 CAPLUS Full-text

DOCUMENT NUMBER: 141:181666

TITLE: Unsymmetrically substituted anthracenes and their organic electroluminescent devices showing long service life

INVENTOR(S): Totani, Yoshiyuki; Tsukada, Hidetaka; Tanabe, Yoshimitsu; Shimamura, Takehiko

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

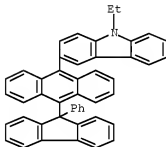
SOURCE: Jpn. Kokai Tokyo Koho, 45 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004224723	A	20040812	JP 2003-13848	20030122 <--
JP 4067414	B2	20080326		

PRIORITY APPLN. INFO.: JP 2003-13848 20030122
OTHER SOURCE(S): MARPAT 141:181666
IT 736158-92-2P
RL: DEV (Device component use); IMF (Industrial manufacture);
PREP (Preparation); USES (Uses)
(manufacture of unsym. substituted anthracenes for organic
electroluminescent devices showing long service life)
RN 736158-92-2 CAPLUS
CN 9H-Carbazole, 9-ethyl-3-[10-(9-phenyl-9H-fluoren-9-yl)-9-anthracenyl]-
(CA INDEX NAME)



L8 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:568210 CAPLUS Full-text
DOCUMENT NUMBER: 141:131023
TITLE: Organic electroluminescent devices employing
blue-emitting dopants based on amine derivatives of
pyrene
INVENTOR(S): Seo, Jeong Dae; Lee, Kyung Hoon; Kim, Hee Jung; Park,
Chun Gun; Oh, Hyoung Yun
PATENT ASSIGNEE(S): Lg Electronics Inc., S. Korea
SOURCE: Eur. Pat. Appl., 43 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1437395	A2	20040714	EP 2003-29661	20031223 <--
EP 1437395	A3	20050831		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
KR 2004057862 A 20040702 KR 2003-20465 20030401 <--

US 20040137270 A1 20040715 US 2003-743778 20031224 <--
 JP 2004204238 A 20040722 JP 2003-428297 20031224 <--
 JP 3926791 B2 20070606
 CN 1535089 A 20041006 CN 2003-10124405 20031224 <--
 JP 2007027779 A 20070201 JP 2006-245563 20060911
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 KR 2003-20465 A 20030401
 JP 2003-428297 A3 20031224

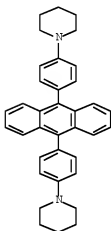
OTHER SOURCE(S): MARPAT 141:131023

IT 722498-62-6

RL: DEV (Device component use); USES (Uses)
 (light-emitting host; organic electroluminescent devices employing
 blue-emitting dopants based on amine derivs. of pyrene)

RN 722498-62-6 CAPLUS

CN Piperidine, 1,1'-(9,10-anthracenediyl-di-4,1-phenylene)bis- (9CI) (CA
 INDEX NAME)



L8 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:533725 CAPLUS Full-text
 DOCUMENT NUMBER: 141:96368
 TITLE: Efficient electroluminescent device
 INVENTOR(S): Brown, Christopher T.; Hatwar, Tukaram K.
 PATENT ASSIGNEE(S): Eastman Kodak Company, USA
 SOURCE: U.S. Pat. Appl. Publ., 40 pp., Cont.-in-part of U.S.
 Ser. No. 334,324, abandoned.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040126617	A1	20040701	US 2003-658010	20030909 <--
EP 1435669	A2	20040707	EP 2003-79144	20031219 <--
EP 1435669	A3	20070704		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2004214201 A 20040729 JP 2003-435177 20031226 <--
 KR 2004062412 A 20040707 KR 2003-100258 20031230 <--
 CN 1534077 A 20041006 CN 2003-10124048 20031231 <--
 US 20050271899 A1 20051208 US 2005-159691 20050623
 PRIORITY APPLN. INFO.: US 2002-334324 B2 20021231
 US 2003-658010 A 20030909

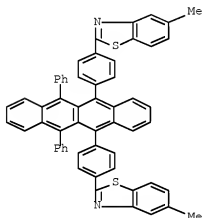
OTHER SOURCE(S): MARPAT 141:96368

IT 478799-67-6

RL: DEV (Device component use); USES (Uses)
 (compound with second band gap; efficient electroluminescent device using
 perfluoranthene derivative compound)

RN 478799-67-6 CAPLUS

CN Benzothiazole, 2,2'-[(6,11-diphenyl-5,12-naphthacenediyl)di-4,1-
 phenylene]bis[5-methyl- (9CI) (CA INDEX NAME)



L8 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:331637 CAPLUS Full-text

DOCUMENT NUMBER: 140:365374

TITLE: Organic light-emitting diode devices with improved
 operational stability

INVENTOR(S): Jarikov, Viktor V.

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: U.S. Pat. Appl. Publ., 108 pp., Cont.-in-part of U.S.
 Ser. No. 131,801, abandoned.
 CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040076853	A1	20040422	US 2003-634324	20030805 <--
US 7183010	B2	20070227		
JP 2003347058	A	20031205	JP 2003-118497	20030423 <--
CN 1453886	A	20031105	CN 2003-124026	20030424 <--
PRIORITY APPLN. INFO.:			US 2002-131801	B2 20020424

OTHER SOURCE(S): MARPAT 140:365374

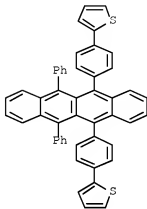
IT 216066-70-5 478799-69-8

RN 216066-70-5 CAPLUS

RN 216066-70-5 CAPLUS

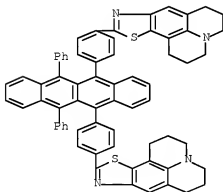
RN 216066-70-5 CAPLUS

Thiophene, 2,2'-(6,11-diphenyl-5,12-naphthacenediyl)di-4,1-phenylene]bis-
(9CI) (CA INDEX NAME)



CN 1H,5H-Benzothiazolo[5,6,7-ij]quinolizine, 10,10'-[(6,11-diphenyl-5,12-naphthacenediyl)di-4,1-phenylene]bis[2,3,6,7-tetrahydro- (9CI) (CA INDEX NAME)

CN 1H,5H-Benzothiazolo[5,6,7-ij]quinolizine, 10,10'-[(6,11-diphenyl-5,12-naphthacenediyl)di-4,1-phenylene]bis[2,3,6,7-tetrahydro- (9CI) (CA INDEX NAME)

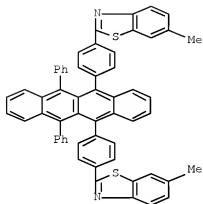


RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)

RN 478799-44-9 CAPLUS

RN 478799-44-9 CAPLUS

CN Benzothiazole, 2,2'-[(6,11-diphenyl-5,12-naphthacenediyl)di-4,1-phenylene]bis[6-methyl- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:19914 CAPLUS Full-text

DOCUMENT NUMBER: 140:67430

TITLE: Electroluminescent anthracene derivatives
for various color-emitting organic electroluminescent devices

INVENTOR(S): Fujita, Tetsushi; Inoue, Tetsuji; Kitagawa, Sumiko

PATENT ASSIGNEE(S): TDK Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 60 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

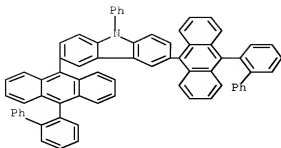
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004002351	A	20040108	JP 2003-88581	20030327 <--
PRIORITY APPLN. INFO.:			JP 2002-89714	A 20020327
OTHER SOURCE(S):	MARPAT	140:67430		

IT 639506-63-1

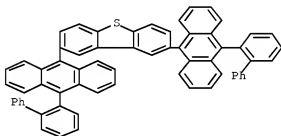
RL: DEV (Device component use); USES (Uses)
(electroluminescent anthracene derivs. for various
color-emitting organic electroluminescent devices)

RN 639506-63-1 CAPLUS

CN 9H-Carbazole, 3,6-bis(10-[1,1'-biphenyl]-2-yl-9-anthracenyl)-9-phenyl-
(CA INDEX NAME)



IT 639506-60-8P
 RL: DEV (Device component use); IMF (Industrial manufacture);
 PREP (Preparation); USES (Uses)
 (electroluminescent anthracene derivs. for various
 color-emitting organic electroluminescent devices)
 RN 639506-60-8 CAPLUS
 CN Dibenzo[thiophene, 2,8-bis(10-[1,1'-biphenyl]-2-yl-9-anthracenyl)- (CA
 INDEX NAME)



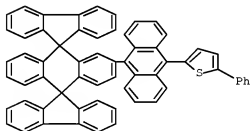
L8 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:913158 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 139:388293
 TITLE: New organic compounds for electroluminescence and
 organic electroluminescent devices using the same
 INVENTOR(S): Kim, Ji-Eun; Son, Se-Hwan; Bae, Jae-Soon; Lee,
 Youn-Gu; Kim, Kong-Kyeum; Lee, Jae-Chol; Jang, Jun-Gi;
 Im, Sung-Gap
 PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
 SOURCE: PCT Int. Appl., 145 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095445	A1	20031120	WO 2003-KR899	20030506 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				

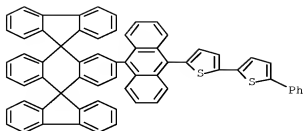
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
 PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
 TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 KR 2003087522 A 20031114 KR 2003-10439 20030219 <--
 AU 2003230308 A1 20031111 AU 2003-230308 20030506 <--
 US 20040067387 A1 20040408 US 2003-431349 20030506 <--
 CN 1556803 A 20041222 CN 2003-801106 20030506 <--
 EP 1501821 A1 20050202 EP 2003-723417 20030506
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 JP 2005531552 T 20051020 JP 2004-503461 20030506
 TW 288774 B 20071021 TW 2003-92112497 20030507
 KR 2004028954 A 20040403 KR 2004-701285 20040129 <--
 US 20070037012 A1 20070215 US 2006-585909 20061025
 PRIORITY APPLN. INFO.: KR 2002-25084 A 20020507
 KR 2003-10439 A 20030219
 US 2003-431349 A3 20030506
 WO 2003-KR899 W 20030506

OTHER SOURCE(S): MARPAT 139:388293

IT 474688-22-7P
 RL: DEV (Device component use); SPN (Synthetic preparation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of new organic compds. for electroluminescence and organic
 electroluminescent devices)
 RN 474688-22-7 CAPLUS
 CN Thiophene, 2-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-
 [9H]fluoren]-2'-yl-9-anthracenyl)-5-phenyl- (9CI) (CA INDEX NAME)



IT 474688-21-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (preparation of new organic compds. for electroluminescence and organic
 electroluminescent devices)
 RN 474688-21-6 CAPLUS
 CN 2,2'-Bithiophene, 5-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-
 [9H]fluoren]-2'-yl-9-anthracenyl)-5'-phenyl- (9CI) (CA INDEX NAME)

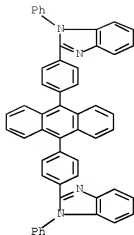


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:912665 CAPLUS Full-text
 DOCUMENT NUMBER: 139:401353
 TITLE: Electroluminescent devices
 INVENTOR(S): Xie, Shuang
 PATENT ASSIGNEE(S): Can.
 SOURCE: U.S. Pat. Appl. Publ., 32 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030215667	A1	20031120	US 2001-985204	20011102 <--
PRIORITY APPLN. INFO.:			US 2001-985204	20011102
OTHER SOURCE(S):	MARPAT 139:401353			
IT 626236-29-1				

RL: DEV (Device component use); USES (Uses)
 (organic electroluminescent devices with anthracene derivative-based active layers and/or benzazole-group containing anthracene derivative electron-transport layers)
 RN 626236-29-1 CAPLUS
 CN 1H-Benzimidazole, 2,2'-(9,10-anthracenediyl-di-4,1-phenylene)bis[1-phenyl- (9CI) (CA INDEX NAME)



L8 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:673851 CAPLUS Full-text

DOCUMENT NUMBER: 139:204846

TITLE: Anthracene compounds, their organic EL device materials, and their EL devices having high emission efficiency, long service life, and good heat resistance

INVENTOR(S): Hosokawa, Chishio; Funabashi, Masakazu; Ikeda, Shuji; Yamamoto, Hiroshi

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003238534	A	20030827	JP 2002-45705	20020222 <---
PRIORITY APPLN. INFO.:			JP 2002-45705	20020222

OTHER SOURCE(S): MARPAT 139:204846

IT 565533-53-5P 585533-54-6P 585533-55-7P

565533-56-8P 585533-57-9P 585533-58-0P

565533-59-1P 585533-64-8P

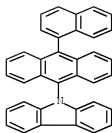
RL: DEV (Device component use); IMF (Industrial manufacture);

PREP (Preparation); USES (Uses)

(anthracene compds. for organic EL device having high emission efficiency, long service life, and good heat resistance)

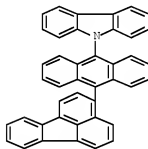
RN 585533-53-5 CAPLUS

CN 9H-Carbazole, 9-[10-(1-naphthalenyl)-9-anthracenyl]- (CA INDEX NAME)



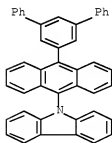
RN 585533-54-6 CAPLUS

CN 9H-Carbazole, 9-[10-(3-fluoranthenyl)-9-anthracenyl]- (CA INDEX NAME)



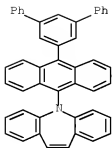
RN 585533-55-7 CAPLUS

CN 9H-Carbazole, 9-(10-[1,1':3',1''-terphenyl]-5'-yl-9-anthracenyl)- (9CI)
(CA INDEX NAME)



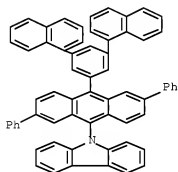
RN 585533-56-8 CAPLUS

CN 5H-Dibenz[b,f]azepine, 5-(10-[1,1':3',1''-terphenyl]-5'-yl-9-anthracenyl)-
(9CI) (CA INDEX NAME)



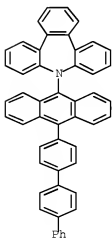
RN 585533-57-9 CAPLUS

CN 9H-Carbazole, 9-[10-(3,5-di-1-naphthalenylphenyl)-2,6-diphenyl-9-anthracenyl]- (CA INDEX NAME)

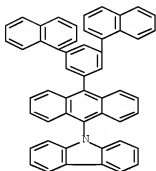


RN 585533-58-0 CAPLUS

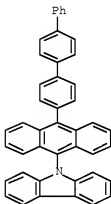
CN 9H-Tribenz[b,d,f]azepine, 9-(10-[1,1':4',1''-terphenyl]-4-yl-9-anthracenyl)- (9CI) (CA INDEX NAME)



RN 585533-59-1 CAPLUS
CN 9H-Carbazole, 9-[10-(3,5-di-1-naphthalenylphenyl)-9-anthracenyl]- (CA
INDEX NAME)



RN 585533-64-8 CAPLUS
CN 9H-Carbazole, 9-(10-[1,1':4',1''-terphenyl]-4-yl-9-anthracenyl)- (9CI)
(CA INDEX NAME)

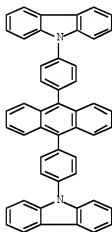


L8 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:628443 CAPLUS Full-text
DOCUMENT NUMBER: 139:171119
TITLE: Organic electroluminescent device comprising coupled
anthracene fluorene derivative and with
amino-substituted hydrocarbon
INVENTOR(S): Totani, Yoshiyuki; Ishida, Tsutomu; Shimamura,
Takehiko; Tanabe, Yoshimitsu; Nakatsuka, Masakatsu
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 122 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

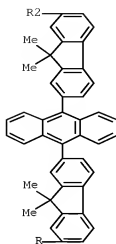
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003229273	A	20030815	JP 2002-25736	20020201 <--
JP 4080213	B2	20080423		

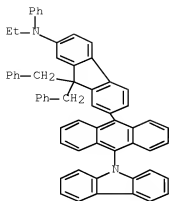
PRIORITY APPLN. INFO.: MARPAT 139:171119
 OTHER SOURCE(S):
 IT 194296-19-0 522615-57-2 577795-87-0
 577795-86-1
 RL: DEV (Device component use); USES (Uses)
 (organic electroluminescent device comprising coupled anthracene
 fluorene derivative and with amino-substituted hydrocarbon)
 RN 194296-19-0 CAPLUS
 CN 9H-Carbazole, 9,9'-(9,10-anthracenediyl)-4,1-phenylene)bis- (CA INDEX
 NAME)



RN 522615-57-2 CAPLUS
 CN 9H-Carbazole, 9,9'-(9,10-anthracenediyl)bis(9,9-dimethyl-9H-fluorene-7,2-diyl)bis- (9CI) (CA INDEX NAME)



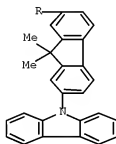
RN 577795-87-0 CAPLUS
 CN 9H-Fluoren-2-amine, 7-[10-(9H-carbazol-9-yl)-9-anthracenyl]-N-ethyl-N-phenyl-9,9-bis(phenylmethyl)- (CA INDEX NAME)



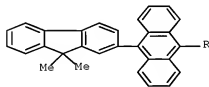
RN 577795-88-1 CAPLUS

CN 9H-Carbazole, 9-[7-[10-(9,9-dimethyl-9H-fluoren-2-yl)-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L8 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:349283 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 138:376099

TITLE: Organic electroluminescent devices of high brightness and luminescent efficiency and anthracene derivatives therefor

INVENTOR(S): Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Totani, Yoshiyuki; Nakatsuka, Masakatsu

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 99 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003128651	A	20030508	JP 2001-317783	20011016 <--
PRIORITY APPLN. INFO.:			JP 2001-317783	20011016

OTHER SOURCE(S): MARPAT 138:376099

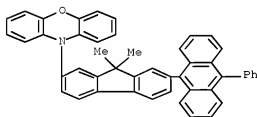
IT 522615-51-6P 522615-52-7P 522615-53-8P
 522615-54-9P 522615-55-0P 522615-56-1P
 522615-57-2P 522615-58-3P 522615-59-4P
 522615-60-7P 522615-61-8P 522615-62-9P
 522615-63-0P 522615-64-1P 522615-65-2P
 522615-66-3P 522615-67-4P 522615-68-5P
 522615-69-6P 522615-70-9P 522615-73-2P
 522615-74-3P 522615-75-4P 522615-76-5P
 522615-77-6P 522615-78-7P 522615-79-8P
 522615-81-2P 522615-82-3P 522615-83-4P
 522615-84-5P 522615-85-6P 522615-86-7P
 522615-87-8P 522615-89-0P 522615-90-3P
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 522615-94-7P 522615-95-8P 522615-96-9P
 522615-97-0P 522615-98-1P 522615-99-2P
 522616-00-3P

RL: DEV (Device component use); IMF (Industrial manufacture);
 PREP (Preparation); USES (Uses)

(spirocyclic compds. containing direct bond between anthracene
 and fluorene rings for organic LED of high luminescent efficiency)

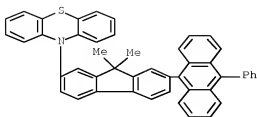
RN 522615-51-6 CAPLUS

CN 10H-Phenoxazine, 10-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluorene-2-yl]- (CA INDEX NAME)



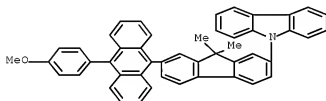
RN 522615-52-7 CAPLUS

CN 10H-Phenothiazine, 10-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluorene-2-yl]- (CA INDEX NAME)



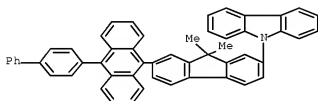
RN 522615-53-8 CAPLUS

CN 9H-Carbazole, 9-[7-[10-(4-methoxyphenyl)-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



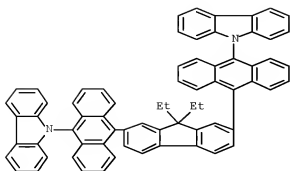
RN 522615-54-9 CAPLUS

CN 9H-Carbazole, 9-[7-[10-[1,1'-biphenyl]-4-yl-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



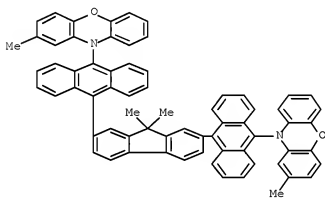
RN 522615-55-0 CAPLUS

CN 9H-Carbazole, 9,9'-[(9,9-diethyl-9H-fluorene-2,7-diyl)di-10,9-anthracenediyl]bis- (9CI) (CA INDEX NAME)



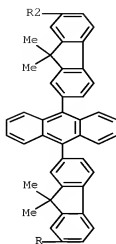
RN 522615-56-1 CAPLUS

CN 10H-Phenoxazine, 10,10'-((9,9-dimethyl-9H-fluorene-2,7-diyl)di-10,9-anthracenediyl)bis[2-methyl- (9CI) (CA INDEX NAME)



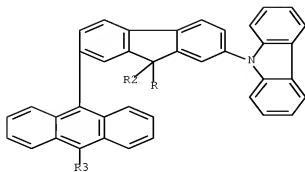
RN 522615-57-2 CAPLUS

CN 9H-Carbazole, 9,9'-[9,10-anthracenediylbis(9,9-dimethyl-9H-fluorene-7,2-diyl)]bis- (9CI) (CA INDEX NAME)



RN 522615-58-3 CAPLUS
 CN 9H-Carbazole, 9,9'-[9,10-anthracenediylbis(9,9-dihexyl-9H-fluorene-7,2-diyl)]bis- (9CI) (CA INDEX NAME)

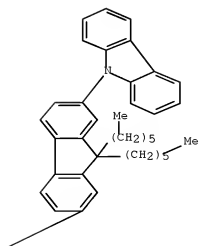
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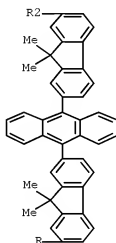
PAGE 3-A



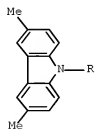


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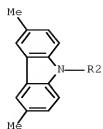
RN 522615-59-4 CAPLUS
 CN 9H-Carbazole, 9,9'-[9,10-anthracenediylbis(9,9-dimethyl-9H-fluorene-7,2-diyl)]bis[3,6-dimethyl- (9CI) (CA INDEX NAME)



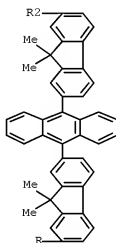
PAGE 1-A



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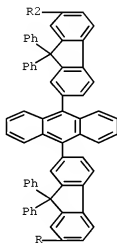


RN 522615-60-7 CAPLUS
 CN 10H-Phenothiazine, 10,10'-[9,10-anthracenediylbis(9,9-dimethyl-9H-fluorene-7,2-diyl)]bis- (9CI) (CA INDEX NAME)



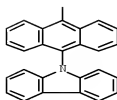
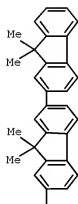


RN 522615-61-8 CAPLUS
 CN 9H-Carbazole, 9,9'-[9,10-anthracenediylbis(9,9-diphenyl-9H-fluorene-7,2-diyl)]bis- (9CI) (CA INDEX NAME)



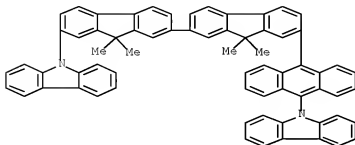


RN 522615-62-9 CAPLUS
 CN 9H-Carbazole, 9-[10-(9,9,9',9'-tetramethyl[2,2'-bi-9H-fluoren]-7-yl)-9-anthracenyl]- (CA INDEX NAME)



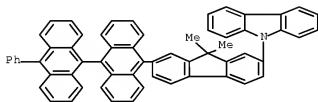
RN 522615-63-0 CAPLUS

CN 9H-Carbazole, 9-[7'-[10-(9H-carbazol-9-yl)-9-anthracenyl]-9,9',9'-tetramethyl[2,2'-bi-9H-fluoren]-7-yl]- (CA INDEX NAME)



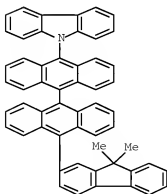
RN 522615-64-1 CAPLUS

CN 9H-Carbazole, 9-[9,9-dimethyl-7-(10'-phenyl[9,9'-bianthracen]-10-yl)-9H-fluoren-2-yl]- (CA INDEX NAME)



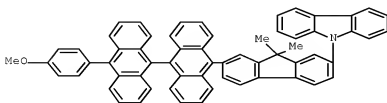
RN 522615-65-2 CAPLUS

CN 9H-Carbazole, 9-[10'-(9,9-dimethyl-9H-fluoren-2-yl)[9,9'-bianthracen]-10-yl]- (CA INDEX NAME)



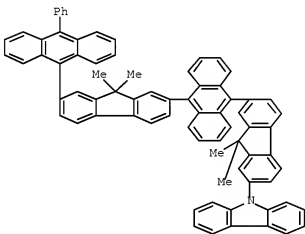
RN 522615-66-3 CAPLUS

CN 9H-Carbazole, 9-[7-[10'-(4-methoxyphenyl)[9,9'-bianthracen]-10-yl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



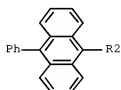
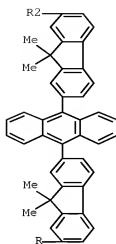
RN 522615-67-4 CAPLUS

CN 9H-Carbazole, 9-[7-[10-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluoren-2-yl]-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)

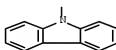
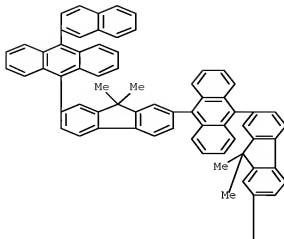


RN 522615-68-5 CAPLUS

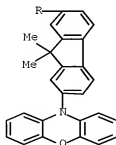
CN 10H-Phenothiazine, 10-[7-[10-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluoren-2-yl]-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)

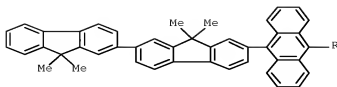


RN 522615-69-6 CAPLUS
 CN 9H-Carbazole, 9-[7-[10-[9,9-dimethyl-7-[10-(2-naphthalenyl)-9-anthracenyl]-
 9H-fluoren-2-yl]-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX
 NAME)

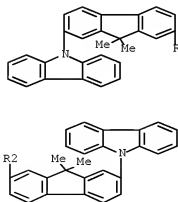
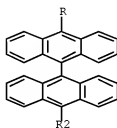


RN 522615-70-9 CAPLUS
 CN 10H-Phenoxazine, 10-[9,9-dimethyl-7-[10-(9,9,9',9'-tetramethyl[2,2'-bi-9H-fluoren]-7-yl)-9-anthracenyl]-9H-fluoren-2-yl]- (CA INDEX NAME)

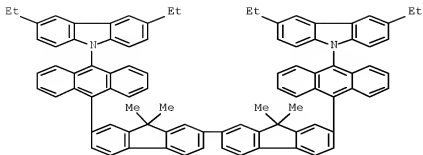




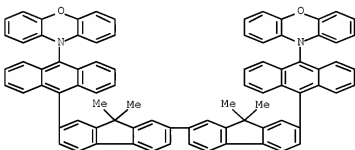
RN 522615-73-2 CAPLUS
 CN 9H-Carbazole, 9,9'-[9,9'-bianthracene]-10,10'-diylbis(9,9-dimethyl-9H-fluorene-7,2-diyl)]bis- (9CI) (CA INDEX NAME)



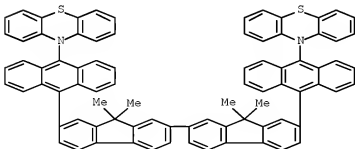
RN 522615-74-3 CAPLUS
 CN 9H-Carbazole, 9,9'-[9,9',9',9'-tetramethyl[2,2'-bi-9H-fluorene]-7,7'-diyl]di-10,9-anthracenediyl]bis[3,6-diethyl- (9CI) (CA INDEX NAME)



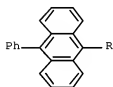
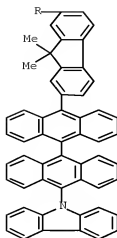
RN 522615-75-4 CAPLUS
 CN 10H-Phenoxazine, 10,10'-[(9,9,9',9'-tetramethyl[2,2'-bi-9H-fluorene]-7,7'-diyl)di-10,9-anthracenediyl]bis- (9CI) (CA INDEX NAME)



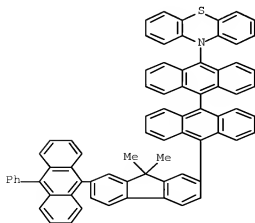
RN 522615-76-5 CAPLUS
 CN 10H-Phenothiazine, 10,10'-[(9,9,9',9'-tetramethyl[2,2'-bi-9H-fluorene]-7,7'-diyl)di-10,9-anthracenediyl]bis- (9CI) (CA INDEX NAME)



RN 522615-77-6 CAPLUS
 CN 9H-Carbazole, 9-[10'-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluorene-2-yl][9,9'-bianthracen]-10-yl]- (CA INDEX NAME)

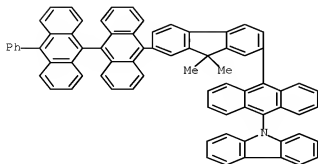


RN 522615-78-7 CAPLUS
 CN 10H-Phenothiazine, 10-[10'-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluoren-2-yl][9,9'-bianthracen]-10-yl]- (CA INDEX NAME)



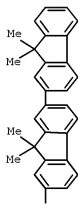
RN 522615-79-8 CAPLUS

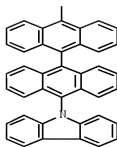
CN 9H-Carbazole, 9-[10-[9,9-dimethyl-7-(10'-phenyl[9,9'-bianthracen]-10-yl)-9H-fluoren-2-yl]-9-anthracenyl]- (CA INDEX NAME)



RN 522615-81-2 CAPLUS

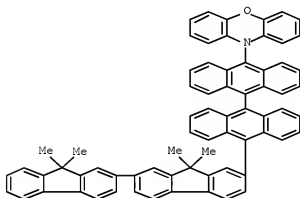
CN 9H-Carbazole, 9-[10'-(9,9,9',9'-tetramethyl[2,2'-bi-9H-fluoren]-7-yl)[9,9'-bianthracen]-10-yl]- (CA INDEX NAME)





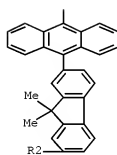
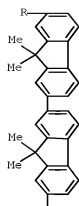
RN 522615-82-3 CAPLUS

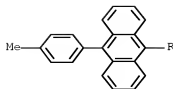
CN 10H-Phenoxazine, 10-[(9,9,9',9'-tetramethyl-2,2'-bi-9H-fluoren)-7-yl]-[9,9'-bianthracen]-10-yl- (CA INDEX NAME)



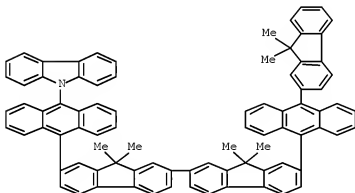
RN 522615-83-4 CAPLUS

CN 9H-Carbazole, 9-[9,9-dimethyl-7-[10-[(9,9,9',9'-tetramethyl-2,2'-bi-9H-fluoren)-7-yl]-9-anthracenyl]-2,2'-bi-9H-fluoren]-9-anthracenyl]-9H-fluoren-2-yl- (CA INDEX NAME)

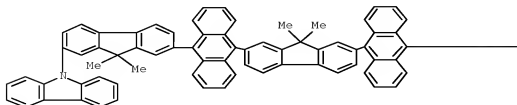




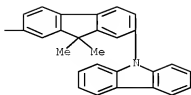
RN 522615-84-5 CAPLUS
 CN 9H-Carbazole, 9-[10-[7'-(10-(9,9-dimethyl-9H-fluoren-2-yl)-9-anthracenyl)-9,9,9',9'-tetramethyl[2,2'-bi-9H-fluoren]-7-yl]-9-anthracenyl]- (CA INDEX NAME)



RN 522615-85-6 CAPLUS
 CN 9H-Carbazole, 9,9'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis[10,9-anthracenediyl(9,9-dimethyl-9H-fluorene-7,2-diyl)]]bis- (9CI) (CA INDEX NAME)

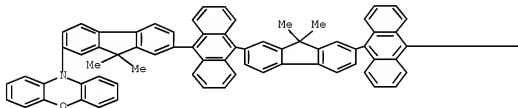


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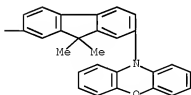


RN 522615-86-7 CAPLUS
 CN 10H-Phenoxazine, 10,10'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis[10,9-anthracenediyl(9,9-dimethyl-9H-fluorene-7,2-diyl)]]bis- (9CI) (CA INDEX NAME)

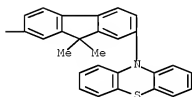
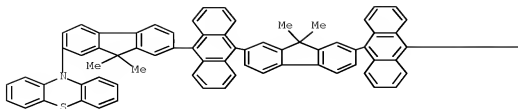
PAGE 1-A



PAGE 1-B

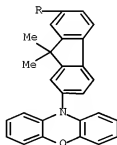


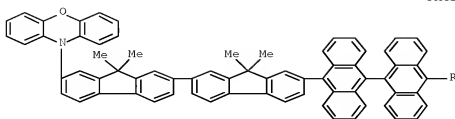
RN 522615-87-8 CAPLUS
 CN 10H-Phenothiazine, 10,10'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis[10,9-anthracenediyl(9,9-dimethyl-9H-fluorene-7,2-diyl)]]bis- (9CI) (CA INDEX NAME)



RN 522615-89-0 CAPLUS

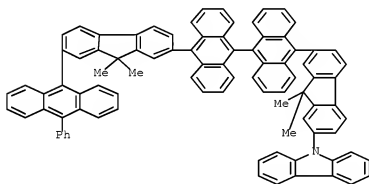
CN 10H-Phenoxazine, 10-[7'-[10'-[9,9-dimethyl-7-(10H-phenoxazin-10-yl)-9H-fluoren-2-yl][9,9'-bianthracen]-10-yl]-9,9,9',9'-tetramethyl[2,2'-bi-9H-fluoren]-7-yl]- (9CI) (CA INDEX NAME)





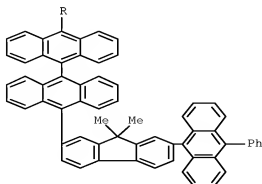
RN 522615-90-3 CAPLUS

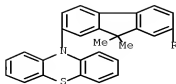
CN 9H-Carbazole, 9-[7-[10'-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluoren-2-yl][9,9'-bianthracen]-10-yl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



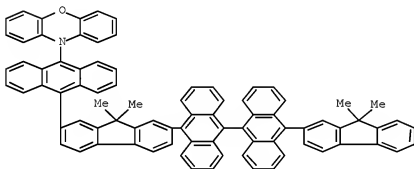
RN 522615-91-4 CAPLUS

CN 10H-Phenothiazine, 10-[7-[10'-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluoren-2-yl][9,9'-bianthracen]-10-yl]-9,9-dimethyl-9H-fluoren-2-yl]- (9CI) (CA INDEX NAME)

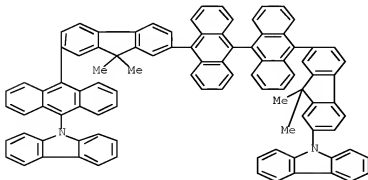




RN 522615-92-5 CAPLUS
 CN 10H-Phenoxazine, 10-[10-[7-[10'-(9,9-dimethyl-9H-fluoren-2-yl)[9,9'-bianthracen]-10-yl]-9,9-dimethyl-9H-fluoren-2-yl]-9-anthracenyl]- (CA INDEX NAME)

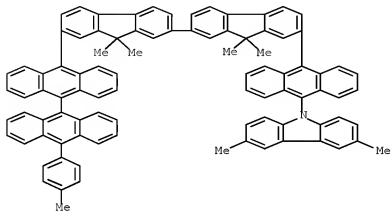


RN 522615-93-6 CAPLUS
 CN 9H-Carbazole, 9-[7-[10'-[7-[10-(9H-carbazol-9-yl)-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl][9,9'-bianthracen]-10-yl]-9,9-dimethyl-9H-fluoren-2-yl]- (9CI) (CA INDEX NAME)



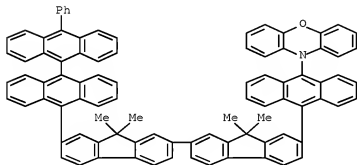
RN 522615-94-7 CAPLUS

CN 9H-Carbazole, 3,6-dimethyl-9-[10-[9,9,9',9'-tetramethyl-7'-[10'-(4-methylphenyl)[9,9'-bianthracen]-10-yl][2,2'-bi-9H-fluoren]-7-yl]-9-anthracenyl]- (CA INDEX NAME)



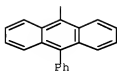
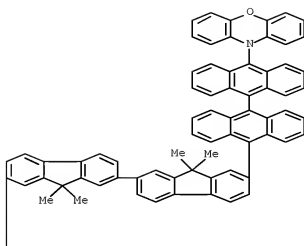
RN 522615-95-8 CAPLUS

CN 10H-Phenoxazine, 10-[10'-[9,9,9',9'-tetramethyl-7'-(10'-phenyl[9,9'-bianthracen]-10-yl)[2,2'-bi-9H-fluoren]-7-yl]-9-anthracenyl]- (9CI) (CA INDEX NAME)

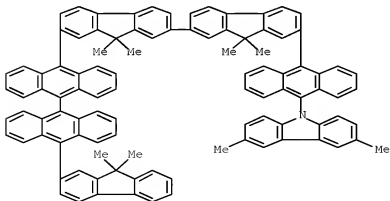


RN 522615-96-9 CAPLUS

CN 10H-Phenoxazine, 10-[10'-[9,9,9',9'-tetramethyl-7'-(10-phenyl-9-anthracenyl)[2,2'-bi-9H-fluoren]-7-yl][9,9'-bianthracen]-10-yl]- (9CI) (CA INDEX NAME)



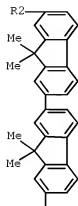
RN 522615-97-0 CAPLUS
 CN 9H-Carbazole, 9-[10-[7'-[10'-(9,9-dimethyl-9H-fluoren-2-yl)[9,9'-bianthracen]-10-yl]-9,9,9',9'-tetramethyl[2,2'-bi-9H-fluoren]-7-yl]-9-anthracenyl]-3,6-dimethyl- (9CI) (CA INDEX NAME)



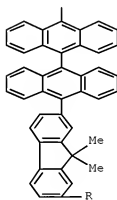
RN 522615-98-1 CAPLUS

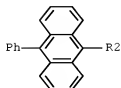
CN 9H-Carbazole, 9-[9,9-dimethyl-7-[10'-[9,9,9',9'-tetramethyl-7'-(10-phenyl-9-anthracenyl)[2,2'-bi-9H-fluoren]-7-yl][9,9'-bianthracen]-10-yl]-9H-fluoren-2-yl)- (9CI) (CA INDEX NAME)

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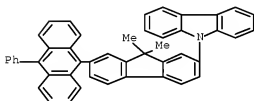
PAGE 2-A





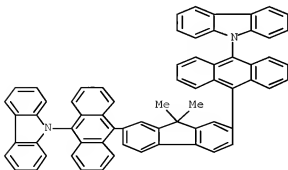
RN 522615-99-2 CAPLUS

CN 9H-Carbazole, 9-[9,9-dimethyl-7-(10-phenyl-9-anthracenyl)-9H-fluoren-2-yl]-
(CA INDEX NAME)



RN 522616-00-8 CAPLUS

CN 9H-Carbazole, 9,9'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)di-10,9-
anthracenediyl]bis- (9CI) (CA INDEX NAME)



IT 522616-09-7 522616-10-0 522616-11-2
522616-13-3 522616-14-4 522616-15-5
522616-16-6 522616-18-8 522616-19-9

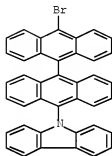
522616-23-5 522616-28-0 522616-29-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(spirocyclic compds. containing direct bond between anthracene
and fluorene rings for organic LED of high luminescent efficiency)

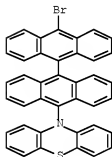
RN 522616-09-7 CAPLUS

CN 9H-Carbazole, 9-(10'-bromo[9,9'-bianthracen]-10-yl)- (CA INDEX NAME)



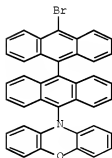
RN 522616-10-0 CAPLUS

CN 10H-Phenothiazine, 10-(10'-bromo[9,9'-bianthracen]-10-yl)- (CA INDEX NAME)

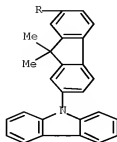


RN 522616-12-2 CAPLUS

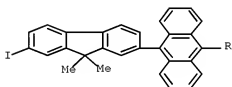
CN 10H-Phenoxazine, 10-(10'-bromo[9,9'-bianthracen]-10-yl)- (CA INDEX NAME)



RN 522616-13-3 CAPLUS
 CN 9H-Carbazole, 9-[7-[10-(7-iodo-9,9-dimethyl-9H-fluoren-2-yl)-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)

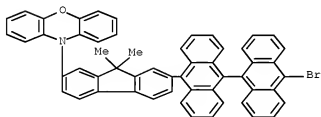


PAGE 1-A

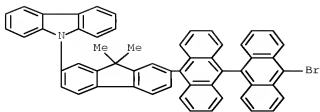


PAGE 2-A

RN 522616-14-4 CAPLUS
 CN 10H-Phenoxazine, 10-[7-(10'-bromo[9,9'-bianthracen]-10-yl)-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)

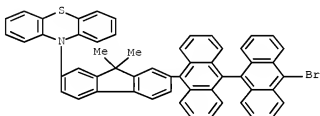


RN 522616-15-5 CAPLUS
 CN 9H-Carbazole, 9-[7-(10'-bromo[9,9'-bianthracen]-10-yl)-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



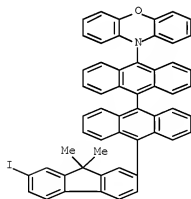
RN 522616-16-6 CAPLUS

CN 10H-Phenothiazine, 10-[7-(10'-bromo[9,9'-bianthracen]-10-yl)-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



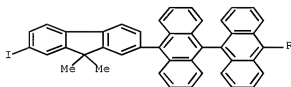
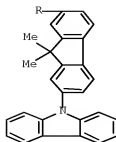
RN 522616-18-8 CAPLUS

CN 10H-Phenoxazine, 10-[10'-(7-iodo-9,9-dimethyl-9H-fluoren-2-yl)[9,9'-bianthracen]-10-yl]- (CA INDEX NAME)



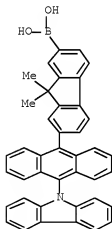
RN 522616-19-9 CAPLUS

CN 9H-Carbazole, 9-[7-[10'-(7-iodo-9,9-dimethyl-9H-fluoren-2-yl)[9,9'-bianthracen]-10-yl]-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



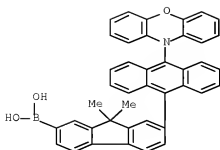
RN 522616-23-5 CAPLUS

CN Boronic acid, [7-[10-(9H-carbazol-9-yl)-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (9CI) (CA INDEX NAME)

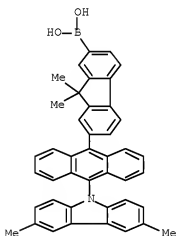


RN 522616-28-0 CAPLUS

CN Boronic acid, [9,9-dimethyl-7-[10-(10H-phenoxazin-10-yl)-9-anthracenyl]-9H-fluoren-2-yl]- (9CI) (CA INDEX NAME)



RN 522616-29-1 CAPLUS
 CN Boronic acid, [7-[10-(3,6-dimethyl-9H-carbazol-9-yl)-9-anthracenyl]-9,9-dimethyl-9H-fluoren-2-yl]- (9CI) (CA INDEX NAME)



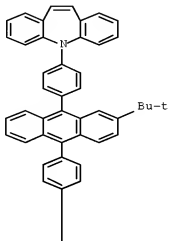
L8 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2002:600244 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 137:301804
 TITLE: Blue-Emitting Anthracenes with End-Capping Diarylamines
 AUTHOR(S): Danel, Krzysztof; Huang, Tai-Hsiang; Lin, Jiann T.;
 Tao, Yu-Tai; Chuen, Chang-Hao
 CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Taipei, WA,
 115, USA
 SOURCE: Chemistry of Materials (2002), 14(9),
 3860-3865
 CODEN: CMATEX; ISSN: 0897-4756
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 468751-03-3P 468751-04-4P
 RL: DEV (Device component use); PNU (Preparation, unclassified);
 PRP (Properties); PREP (Preparation); USES (Uses)
 (blue-emitting anthracenes with end-capping diarylamines and

their properties and applications)

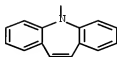
RN 468751-03-3 CAPLUS

CN 5H-Dibenz[b,f]azepine, 5,5'-[[2-(1,1-dimethylethyl)-9,10-anthracenediyl]di-
4,1-phenylene]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

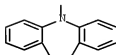
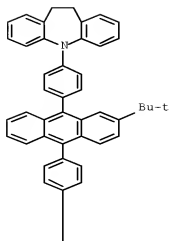


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RN 468751-04-4 CAPLUS

CN 5H-Dibenz[b,f]azepine, 5,5'-[[2-(1,1-dimethylethyl)-9,10-anthracenediyl]di-
4,1-phenylene]bis[10,11-dihydro- (9CI) (CA INDEX NAME)

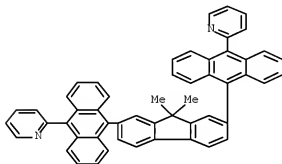


REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2002:142641 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 136:191499
 TITLE: Hydrocarbon compound for organic electroluminescent elements and using them
 INVENTOR(S): Ishida, Tsutomu; Shimamura, Takehiko; Totani, Yoshiyuki; Nakatsuka, Masakatsu
 PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan
 SOURCE: PCT Int. Appl., 251 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002014244	A1	20020221	WO 2001-JP6920	20010810 <--
W: KR, US				
RW: DE, FR, NL				
JP 2002154993	A	20020528	JP 2001-243306	20010810 <--
EP 1221434	A1	20020710	EP 2001-955670	20010810 <--

R: DE, FR, NL
 TW 290546 B 20071201 TW 2001-90119621 20010810
 US 20030087126 A1 20030508 US 2002-110241 20020410 <--
 US 6929870 B2 20050816
 US 20050074631 A1 20050407 US 2004-930874 20040901
 US 7166240 B2 20070123
 PRIORITY APPLN. INFO.: JP 2000-242476 A 20000810
 JP 2000-268568 A 20000905
 JP 2000-24276 A 20000810
 WO 2001-JP6920 W 20010810
 US 2002-110241 A3 20020410
 OTHER SOURCE(S): MARPAT 136:191499
 IT 499606-64-6
 RL: DEV (Device component use); TEM (Technical or engineered
 material use); USES (Uses)
 (preparation of hydrocarbon compound for organic electroluminescent
 devices)
 RN 400606-64-6 CAPLUS
 CN Pyridine, 2,2'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)di-10,9-
 anthracenediyl]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
 L8 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2001:730670 CAPLUS Full-text
 DOCUMENT NUMBER: 135:280171
 TITLE: Anthracene derivatives and organic
 electroluminescent devices made by using the same
 INVENTOR(S): Hosokawa, Chishio; Ikeda, Hidetsugu; Funahashi,
 Masakazu
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 71 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
WO 2001072673	A1	20011004	WO 2001-JP2330	20010323 <--
W: CN, IN, JP, KR				

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, TR

EP 1182183	A1	20020227	EP 2001-915727	20010323 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1754877	A	20060405	CN 2005-10106888	20010323
US 20020048687	A1	20020425	US 2001-818846	20010328 <--
TW 574342	B	20040201	TW 2001-90107379	20010328 <--
IN 2001CN01650	A	20070907	IN 2001-CN1650	20011126
US 20040100188	A1	20040527	US 2003-610930	20030702 <--
US 6797848	B2	20040928		

PRIORITY APPLN. INFO.:

JP 2000-90644	A	20000329
JP 2000-319297	A	20001019
CN 2001-800733	A3	20010323
WO 2001-JP2330	W	20010323
US 2001-818846	B1	20010328

OTHER SOURCE(S): MARPAT 135:280171

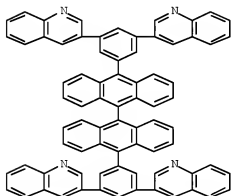
IT 363609-61-4 363609-62-5 363609-63-6
363609-72-7

RL: DEV (Device component use); USES (Uses)

(anthracene derivs. and organic electroluminescent devices made
by using the same)

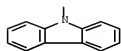
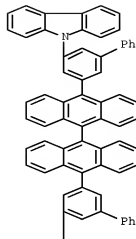
RN 363609-61-4 CAPLUS

CN Quinoline, 3,3',3'',3'''-([9,9'-bianthracene]-10,10'-diyl)-5,1,3-
benzenetriyl)tetrakis- (9CI) (CA INDEX NAME)



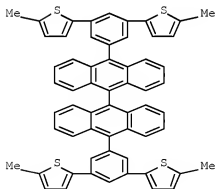
RN 363609-62-5 CAPLUS

CN 9H-Carbazole, 9,9'-bis-([9,9'-bianthracene]-10,10'-diyl)-5,1,3-
benzenetriyl)tetrakis- (9CI) (CA INDEX NAME)



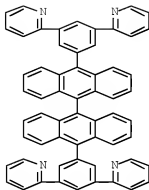
RN 363609-63-6 CAPLUS

CN Thiophene, 2,2',2'',2'''-([9,9'-bianthracene]-10,10'-diyl)-5,1,3-benzenetriyl)tetrakis[5-methyl- (9CI) (CA INDEX NAME)



RN 363609-72-7 CAPLUS

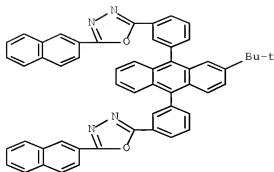
CN Pyridine, 2,2',2'',2'''-([9,9'-bianthracene]-10,10'-diyl)-5,1,3-benzenetriyl)tetrakis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:756254 CAPLUS Full-text
 DOCUMENT NUMBER: 132:7423
 TITLE: Blue light-emitting organic thin film electroluminescent (EL) device
 INVENTOR(S): Ito, Yuichi; Kai, Teruhiko; Sakaki, Yuichi
 PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11329732	A	19991130	JP 1998-138830	19980520 <--
JP 3769934	B2	20060426		
PRIORITY APPLN. INFO.:			JP 1998-138830	19980520
OTHER SOURCE(S):	MARPAT 132:7423			
IT 250341-07-2				
RL: DEV (Device component use); USES (Uses)				
(blue light-emitting organic thin film electroluminescent device containing anthracene derivative)				
RN 250341-07-2 CAPLUS				
CN 1,3,4-Oxadiazole, 2,2'-[[2-(1,1-dimethylethyl)-9,10-anthracenediyl]di-3,1-phenylene]bis[5-(2-naphthalenyl)- (9CI) (CA INDEX NAME)				



L8 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:260962 CAPLUS Full-text

DOCUMENT NUMBER: 130:344892

TITLE: Organic electroluminescent material containing anthracene derivative and organic electroluminescent device with it

INVENTOR(S): Tamano, Michiko; Maki, Shinichiro; Onikubo, Shunichi; Okutsu, Satoshi; Enokida, Toshio

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

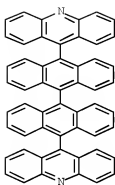
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

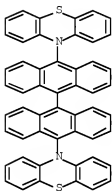
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11111458	A	19990423	JP 1997-264468	19970929 <--
PRIORITY APPLN. INFO.:			JP 1997-264468	19970929
OTHER SOURCE(S):			MARPAT 130:344892	
IT 223735-35-1 223735-38-4 223735-39-5				
223735-51-1				
RL: DEV (Device component use); MOA (Modifier or additive use);				
TEM (Technical or engineered material use); USES (Uses)				
(light-emitting material containing anthracene derivative for electroluminescent device)				
RN 223735-35-1 CAPLUS				
CN Acridine, 9,9'-[9,9'-bianthracene]-10,10'-diylbis- (9CI) (CA INDEX NAME)				



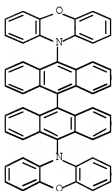
RN 223735-38-4 CAPLUS

CN 10H-Phenothiazine, 10,10'-(9,9'-bianthracene)-10,10'-diylbis- (9CI) (CA INDEX NAME)

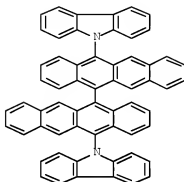


RN 223735-39-5 CAPLUS

CN 10H-Phenoxazine, 10,10'-(9,9'-bianthracene)-10,10'-diylbis- (9CI) (CA INDEX NAME)



RN 223735-51-1 CAPLUS
 CN 9H-Carbazole, 9,9'-(5,5'-binaphthacene)-12,12'-diylbis- (9CI) (CA INDEX NAME)



L8 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:519436 CAPLUS Full-text

DOCUMENT NUMBER: 127:197527

TITLE: Light-emitting material for organo-electroluminescence device and organo-electroluminescence device for which the light-emitting material is adapted

INVENTOR(S): Tamano, Michiko; Enokida, Toshio

PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 786926	A2	19970730	EP 1997-300551	19970129 <--
EP 786926	A3	19970806		
EP 786926	B1	20010822		
R: DE, FR, GB				
JP 09268283	A	19971014	JP 1997-7113	19970120 <--
JP 3511825	B2	20040329		
US 5811834	A	19980922	US 1997-788436	19970128 <--
DE 19758655	C2	20021107	DE 1997-19758655	19971126 <--

PRIORITY APPLN. INFO.:

JP 1996-12488	A	19960129
JP 1996-314920	A	19961126
JP 1997-3382	A	19970110

OTHER SOURCE(S): MARPAT 127:197527

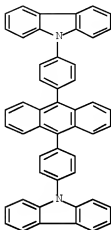
IT 194296-19-0 194296-21-4 194296-24-7
 194296-26-3 194296-28-1 194296-30-5
 194296-32-7

RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (light-emitting materials based on bis(aminophenyl)anthracene

derivs. for organic electroluminescent devices and the electroluminescent devices and devices using them)

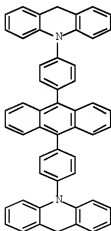
RN 194296-19-0 CAPLUS

CN 9H-Carbazole, 9,9'-(9,10-anthracenediyldi-4,1-phenylene)bis- (CA INDEX NAME)



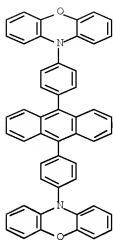
RN 194296-21-4 CAPLUS

CN Acridine, 10,10'-(9H,9'H)-(9,10-anthracenediyldi-4,1-phenylene)bis- (9CI)
(CA INDEX NAME)



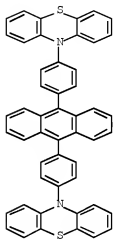
RN 194296-24-7 CAPLUS

CN 10H-Phenoxazine, 10,10'-(9,10-anthracenediyldi-4,1-phenylene)bis- (9CI)
(CA INDEX NAME)



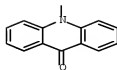
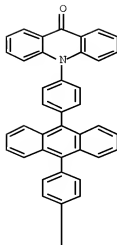
RN 194296-26-9 CAPLUS

CN 10H-Phenothiazine, 10,10'-(9,10-anthracenediyl-di-4,1-phenylene)bis- (9CI)
(CA INDEX NAME)

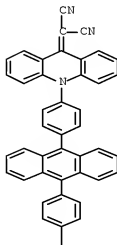


RN 194296-28-1 CAPLUS

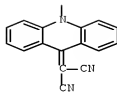
CN 9(10H)-Acridinone, 10,10'-(9,10-anthracenediyl-di-4,1-phenylene)bis- (9CI)
(CA INDEX NAME)



RN 194296-30-5 CAPLUS
 CN Propanedinitrile, 2,2'-(9,10-anthracenediylbis(4,1-phenylene-10(9H)-acridinyl-9-ylidene)]bis- (9CI) (CA INDEX NAME)

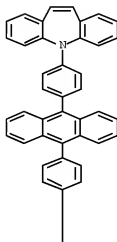


PAGE 2-A

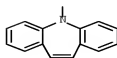


RN 194296-32-7 CAPLUS
CN 5H-Dibenz[b,f]azepine, 5,5'-(9,10-anthracenediyl-di-4,1-phenylene)bis-
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



DOCUMENT NUMBER: 125:127552
 TITLE: Liquid crystal optically addressed spatial light modulators with organic polymer thin-film photoconductors
 AUTHOR(S): Parfenov, Alexander; Rumyantsev, Boris; Danilina, Ludmila; Pebalk, Dmitri; Kotov, Boris
 CORPORATE SOURCE: Lebedev Physics Institute, Moscow, 117924, Russia
 SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1996), 2722(Smart Electronics and MEMS), 241-249
 CODEN: PSISDG; ISSN: 0277-786X
 PUBLISHER: SPIE-The International Society for Optical Engineering
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 106725-36-4
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (liquid crystal optically addressed spatial light modulators with organic polymer thin-film photoconductors)
 RN 106725-36-4 CAPLUS
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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=> file registry
 COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
112.88	291.45

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES: 19 MAY 2008 HIGHEST RN 1021481-05-9
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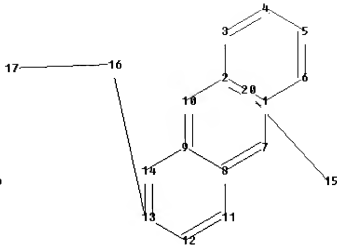
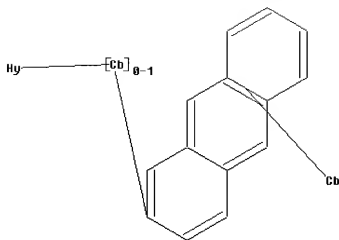
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on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

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chain nodes :

15 16 17

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds :

13-16 16-17

ring bonds :

1-2 1-6 1-7 2-3 2-10 3-4 4-5 5-6 7-8 8-9 8-11 9-10 9-14 11-12 12-13 13-14

exact/norm bonds :

16-17

exact bonds :

13-16

normalized bonds :

1-2 1-6 1-7 2-3 2-10 3-4 4-5 5-6 7-8 8-9 8-11 9-10 9-14 11-12 12-13 13-14

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 20:Atom

L9 STRUCTURE UPLOADED

=> s l9 sss full

FULL SEARCH INITIATED 09:32:51 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 484919 TO ITERATE

99.6% PROCESSED 483135 ITERATIONS

245 ANSWERS

100.0% PROCESSED 484919 ITERATIONS

245 ANSWERS

SEARCH TIME: 00.00.18

L10 245 SEA SSS FUL L9

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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
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FULL ESTIMATED COST

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FILE LAST UPDATED: 19 May 2008 (20080519/ED)

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=> s l10

L11 84 L10

=> s l10 and dev/rl

84 L10
790747 DEV/RL
L12 39 L10 AND DEV/RL

=> s l12 and py<=2004

25083671 PY<=2004
L13 15 L12 AND PY<=2004

=> d l13 1-15 ibib hitstr

L13 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1005863 CAPLUS Full-text

DOCUMENT NUMBER: 143:315152

TITLE: Complex fluorene-containing compounds for use in OLED devices

INVENTOR(S): Zheng, Shiyang; Vaeth, Kathleen M.

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: U.S. Pat. Appl. Publ., 76 pp., Cont.-in-part of U.S. Ser. No. 335,441.

CODEN: USXXCO

DOCUMENT TYPE: Patent

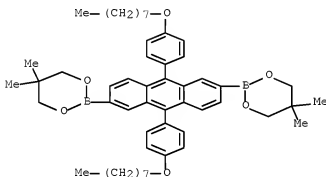
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050202279	A1	20050915	US 2005-122962	20050505
US 7285341	B2	20071023		
US 20040131881	A1	20040708	US 2002-335441	20021231 <--
			US 2002-335441	A2 20021231

PRIORITY APPLN. INFO.:
 OTHER SOURCE(S): MARPAT 143:315152
 IT 719315-90-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (electroluminescent devices employing complex fluorene-containing compds.)
 RN 719315-90-9 CAPLUS
 CN 1,3,2-Dioxaborinane, 2,2'-[9,10-bis[4-(octyloxy)phenyl]-2,6-anthracenediyl]bis[5,5-dimethyl- (CA INDEX NAME)]



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:1037434 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 142:13544
 TITLE: ITO film treated by nitrogen plasma and the organic luminescent device using the same
 INVENTOR(S): Son, Se-Hwan; Kang, Min-Soo; Jeon, Sang-Young; Kim, Jong-Geol
 PATENT ASSIGNEE(S): LG Chem., Ltd., S. Korea
 SOURCE: PCT Int. Appl., 24 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

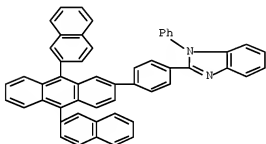
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004105447	A1	20041202	WO 2004-KR1181	20040519 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

KR 2004100485	A	20041202	KR 2003-32864	20030523 <--
KR 808790	B1	20080303		
EP 1629700	A1	20060301	EP 2004-733999	20040519
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CN 1781342	A	20060531	CN 2004-80011315	20040519
JP 2006526872	T	20061124	JP 2006-500696	20040519
US 20060209529	A1	20060921	US 2005-555056	20051028
PRIORITY APPLN. INFO.:			KR 2003-32864	A 20030523
			WO 2004-KR1181	W 20040519

IT 561064-11-7
 RL: CPS (Chemical process); DEV (Device component use); PEP
 (Physical, engineering or chemical process); PRP (Properties); PYP
 (Physical process); PROC (Process); USES (Uses)
 (ITO film treated by nitrogen plasma and organic luminescent device using
 the same)
 RN 561064-11-7 CAPLUS
 CN 1H-Benzimidazole, 2-[4-(9,10-di-2-naphthalenyl-2-anthracenyl)phenyl]-1-
 phenyl- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2008 ACS ON STN
 ACCESSION NUMBER: 2004:707870 CAPLUS Full-text
 DOCUMENT NUMBER: 141:382043
 TITLE: Enhanced Energy and Quantum Efficiencies of a
 Nanocrystalline Photoelectrochemical Cell Sensitized
 with a Donor-Acceptor Dyad Derived from Fluorescein
 AUTHOR(S): Hattori, Shigeki; Hasobe, Taku; Ohkubo, Kei; Urano,
 Yasuteru; Umezawa, Naoki; Nagano, Tetsuo; Wada, Yuji;
 Yanagida, Shozo; Fukuzumi, Shunichi
 CORPORATE SOURCE: Department of Material and Life Science, Graduate
 School of Engineering, CREST, Japan Science and
 Technology Agency, Osaka University, Osaka, Suita,
 565-0871, Japan
 SOURCE: Journal of Physical Chemistry B (2004),
 108(39), 15200-15205
 CODEN: JPCBFK; ISSN: 1520-6106

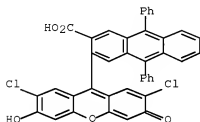
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 245122-43-4 781666-15-7 781666-16-8

RL: DEV (Device component use); USES (Uses)
(enhancement of efficiency of photoelectrochem. cells with
donor-acceptor dyads derived from fluorescein)

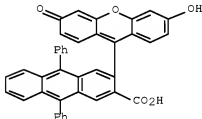
RN 245122-43-4 CAPLUS

CN 2-Anthracenecarboxylic acid, 3-(2,7-dichloro-6-hydroxy-3-oxo-3H-xanthen-9-yl)-9,10-diphenyl- (CA INDEX NAME)



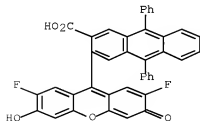
RN 781666-15-7 CAPLUS

CN 2-Anthracenecarboxylic acid, 3-(6-hydroxy-3-oxo-3H-xanthen-9-yl)-9,10-diphenyl- (CA INDEX NAME)



RN 781666-16-8 CAPLUS

CN 2-Anthracenecarboxylic acid, 3-(2,7-difluoro-6-hydroxy-3-oxo-3H-xanthen-9-yl)-9,10-diphenyl- (CA INDEX NAME)

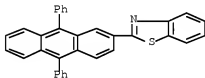


REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS ON STN
ACCESSION NUMBER: 2004:569278 CAPLUS Full-text
DOCUMENT NUMBER: 141:131039
TITLE: Electroluminescent device
INVENTOR(S): Murase, Seichiro; Tominaga, Takeshi; Kitazawa, Daisuke
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004200162	A	20040715	JP 2003-407179	20031205 <--
PRIORITY APPLN. INFO.: OTHER SOURCE(S): IT 721969-98-8		MARPAT 141:131039	JP 2002-353461	A 20021205

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(dopant in electroluminescent layer; organic electroluminescent device)
RN 721969-98-8 CAPLUS
CN Benzothiazole, 2-(9,10-diphenyl-2-anthracenyl)- (CA INDEX NAME)



L13 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS ON STN
ACCESSION NUMBER: 2004:550600 CAPLUS Full-text
DOCUMENT NUMBER: 141:113842
TITLE: Complex fluorene-containing compounds for use in OLED devices
INVENTOR(S): Zheng, Shiyang; Vaeth, Kathleen M.
PATENT ASSIGNEE(S): Eastman Kodak Company, USA
SOURCE: U.S. Pat. Appl. Publ., 71 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040131881	A1	20040708	US 2002-335441	20021231 <--
WO 2004061047	A2	20040722	WO 2003-US40217	20031218 <--
WO 2004061047	A3	20040826		

W: CN, JP, KP

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IT, LU, MC, NL, PT, RO, SE, SI, SK, TR
 EP 1578887 A2 20050928 EP 2003-814854 20031218
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK
 US 20040241496 A1 20041202 US 2004-875011 20040623 <--
 US 7348071 B2 20080325
 US 20050202279 A1 20050915 US 2005-122962 20050505
 US 7285341 B2 20071023
 PRIORITY APPLN. INFO.: US 2002-334359 A2 20021231
 US 2002-335441 A 20021231
 WO 2003-US40217 W 20031218

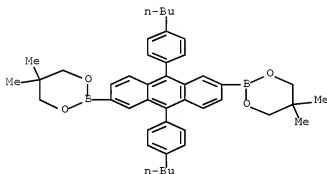
OTHER SOURCE(S): MARPAT 141:113842

IT 719316-06-0

RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (complex fluorene-containing compds. for use in OLED devices)

RN 719316-06-0 CAPLUS

CN 1,3,2-Dioxaborinane, 2,2'-[9,10-bis(4-butylphenyl)-2,6-anthracenediyl]bis[5,5-dimethyl- (CA INDEX NAME)

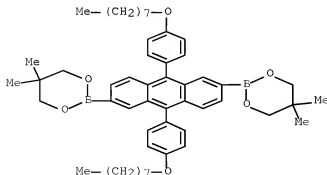


IT 719315-90-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (complex fluorene-containing compds. prepared using)

RN 719315-90-9 CAPLUS

CN 1,3,2-Dioxaborinane, 2,2'-[9,10-bis[4-(octyloxy)phenyl]-2,6-anthracenediyl]bis[5,5-dimethyl- (CA INDEX NAME)



L13 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:550599 CAPLUS Full-text

DOCUMENT NUMBER: 141:113841

TITLE: Complex fluorene-containing electroluminescent compounds

and electroluminescent devices employing compounds

INVENTOR(S): Zheng, Shiyang; Vaeth, Kathleen M.; Bennett, Grace A.

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: U.S. Pat. Appl. Publ., 66 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040131880	A1	20040708	US 2002-334359	20021231 <--
US 6849348	B2	20050201		
WO 2004061048	A1	20040722	WO 2003-US40731	20031219 <--
W: CN, JP, KR				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,				
IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
CN 1756825	A	20060405	CN 2003-80110052	20031219
JP 2006512395	T	20060413	JP 2004-565609	20031219
US 20040241496	A1	20041202	US 2004-875011	20040623 <--
US 7348071	B2	20080325		
PRIORITY APPLN. INFO.:			US 2002-334359	A 20021231
			US 2002-335441	A2 20021231
			WO 2003-US40731	W 20031219

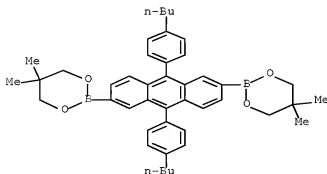
OTHER SOURCE(S): MARPAT 141:113841

IT 719316-06-0

RL: DEV (Device component use); PRP (Properties); USES (Uses)
(complex fluorene-containing electroluminescent compds. and
electroluminescent devices employing compds.)

RN 719316-06-0 CAPLUS

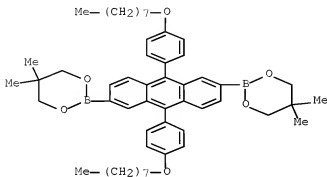
CN 1,3,2-Dioxaborinane, 2,2'-[9,10-bis(4-butylphenyl)-2,6-
anthracenediyl]bis[5,5-dimethyl- (CA INDEX NAME)



IT 719315-90-9F

RL: SPN (Synthetic preparation); PREP (Preparation)
(complex fluorene-containing electroluminescent compds. prepared using)

RN 719315-90-9 CAPLUS
 CN 1,3,2-Dioxaborinane, 2,2'-[9,10-bis[4-(octyloxy)phenyl]-2,6-anthracenediyl]bis[5,5-dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:490222 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 141:61815
 TITLE: Electroluminescent devices with low work function anode
 INVENTOR(S): Son, Se-Hwan; Jang, Jun-Gi; Jeon, Sang-Young; Yoon, Seok-Hee; Lee, Jae-Chol; Kim, Kong-Kyeum
 PATENT ASSIGNEE(S): S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 22 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040113547	A1	20040617	US 2003-722812	20031126 <--
KR 2004051507	A	20040618	KR 2003-87159	20031203 <--
WO 2004054326	A2	20040624	WO 2003-KR2659	20031205 <--
WO 2004054326	A3	20040916		
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AU 2003302867	A1	20040630	AU 2003-302867	20031205 <--
EP 1570711	A2	20050907	EP 2003-812707	20031205
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JP 2006503443	T	20060126	JP 2004-558519	20031205

CN 1989787	A	20070627	CN 2003-80100099	20031205
EP 1842890	A1	20071010	EP 2007-14668	20031205
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IT, LI, LU, MC, NL, PT, RO, SE, SI, SK, TR				
TW 241864	B	20051011	TW 2003-92134931	20031210
IN 2006DN06202	A	20070831	IN 2006-DN6202	20061023
IN 2006DN06203	A	20070831	IN 2006-DN6203	20061023
IN 2006DN06260	A	20070831	IN 2006-DN6260	20061025
US 20070257605	A1	20071108	US 2007-812257	20070615
US 20080001532	A1	20080103	US 2007-812256	20070615
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PRIORITY APPLN. INFO.:				A 20021211
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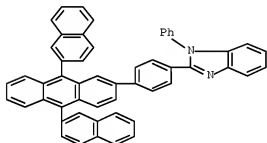
OTHER SOURCE(S): MARPAT 141:61815

IT 561064-11-7

RL: DEV {Device component use}; USES (Uses)
(electroluminescent devices with low work function anode)

RN 561064-11-7 CAPLUS

CN 1H-Benzimidazole, 2-[4-(9,10-di-2-naphthalenyl-2-anthracenyl)phenyl]-1-phenyl- (CA INDEX NAME)



L13 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:913158 CAPLUS Full-text

DOCUMENT NUMBER: 139:388293

TITLE: New organic compounds for electroluminescence and organic electroluminescent devices using the same
INVENTOR(S): Kim, Ji-Eun; Son, Se-Hwan; Bae, Jae-Soon; Lee, Yoon-Gu; Kim, Kong-Kyeum; Lee, Jae-Chol; Jang, Jun-Gi; Im, Sung-Gap

PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea

SOURCE: PCT Int. Appl., 145 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095445	A1	20031120	WO 2003-KR899	20030506 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
KR 2003087522	A	20031114	KR 2003-10439	20030219 <--
AU 2003230308	A1	20031111	AU 2003-230308	20030506 <--
US 20040067387	A1	20040408	US 2003-431349	20030506 <--
CN 1556803	A	20041222	CN 2003-801106	20030506 <--
EP 1501821	A1	20050202	EP 2003-723417	20030506
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
JP 2005531552	T	20051020	JP 2004-503461	20030506
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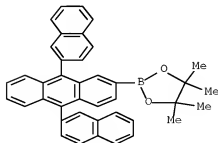
OTHER SOURCE(S): MARPAT 139:388293

IT 624744-67-8P

RL: DEV (Device component use); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of new organic compds. for electroluminescence and organic electroluminescent devices)

RN 624744-67-8 CAPLUS

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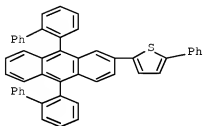


IT 624743-68-6P 624743-76-6P 624743-78-8P
 624743-83-5P 624743-86-6P 624743-88-0P
 624743-90-4P

RL: DEV (Device component use); SPN (Synthetic preparation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of new organic compds. for electroluminescence and organic
electroluminescent devices)

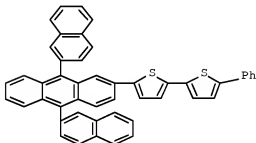
RN 624743-68-6 CAPLUS

CN Thiophene, 2-[9,10-bis([1,1'-biphenyl]-2-yl)-2-anthracenyl]-5-phenyl- (CA
INDEX NAME)



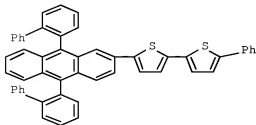
RN 624743-76-6 CAPLUS

CN 2,2'-Bithiophene, 5-(9,10-di-2-naphthalenyl-2-anthracenyl)-5'-phenyl- (CA
INDEX NAME)



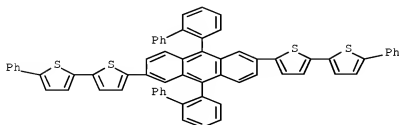
RN 624743-78-8 CAPLUS

CN 2,2'-Bithiophene, 5-[9,10-bis([1,1'-biphenyl]-2-yl)-2-anthracenyl]-5'-
phenyl- (CA INDEX NAME)



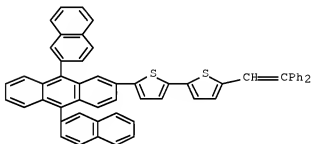
RN 624743-83-5 CAPLUS

CN 2,2'-Bithiophene, 5,5''-[9,10-bis([1,1'-biphenyl]-2-yl)-2,6-anthracenediyl]bis[5'-phenyl]- (9CI) (CA INDEX NAME)



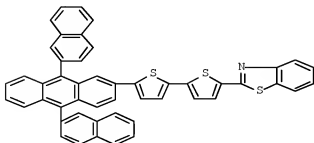
RN 624743-86-8 CAPLUS

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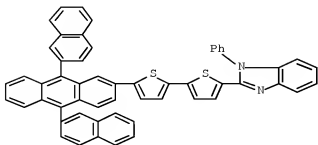
RN 624743-88-0 CAPLUS

CN Benzothiazole, 2-[5'-(9,10-di-2-naphthalenyl-2-anthracenyl)[2,2'-bithiophen]-5-yl]- (CA INDEX NAME)

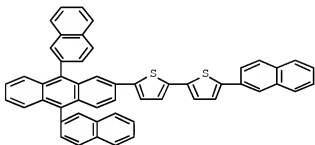


RN 624743-90-4 CAPLUS

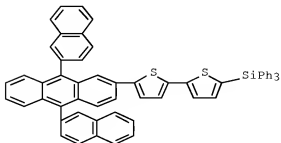
CN 1H-Benzimidazole, 2-[5'-(9,10-di-2-naphthalenyl-2-anthracenyl)[2,2'-bithiophen]-5-yl]-1-phenyl- (CA INDEX NAME)



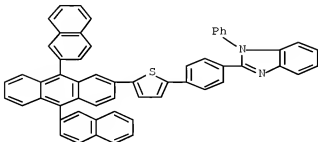
IT 624744-75-8P 624744-76-9P 624744-78-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of new organic comps. for electroluminescence and organic
 electroluminescent devices)
 RN 624744-75-8 CAPLUS
 CN 2,2'-Bithiophene, 5-(9,10-di-2-naphthalenyl-2-anthracenyl)-5'-(2-
 naphthalenyl)- (CA INDEX NAME)



RN 624744-76-9 CAPLUS
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 (triphenylsilyl)- (CA INDEX NAME)



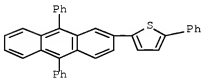
RN 624744-78-1 CAPLUS
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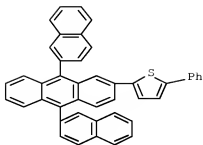
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RL: TEM (Technical or engineered material use); USES (Uses)
 (preparation of new organic comps. for electroluminescence and organic
 electroluminescent devices)

RN 624743-65-3 CAPLUS
 CN Thiophene, 2-(9,10-diphenyl-2-anthracenyl)-5-phenyl- (CA INDEX NAME)

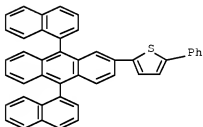


RN 624743-66-4 CAPLUS
 CN Thiophene, 2-(9,10-di-2-naphthalenyl-2-anthracenyl)-5-phenyl- (CA INDEX NAME)



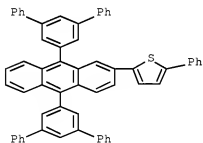
RN 624743-67-5 CAPLUS

CN Thiophene, 2-(9,10-di-1-naphthalenyl-2-anthracenyl)-5-phenyl- (CA INDEX NAME)



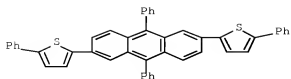
RN 624743-69-7 CAPLUS

CN Thiophene, 2-[9,10-bis([1,1':3',1''-terphenyl]-5'-yl)-2-anthracenyl]-5-phenyl- (9CI) (CA INDEX NAME)



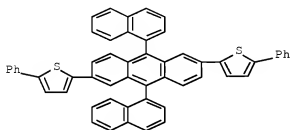
RN 624743-70-0 CAPLUS

CN Thiophene, 2,2'-(9,10-diphenyl-2,6-anthracenediyl)bis[5-phenyl- (CA INDEX NAME)



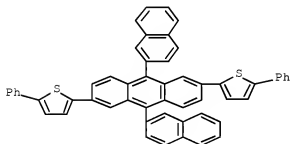
RN 624743-71-1 CAPLUS

CN Thiophene, 2,2'-(9,10-di-1-naphthalenyl-2,6-anthracenediyl)bis[5-phenyl-
(CA INDEX NAME)



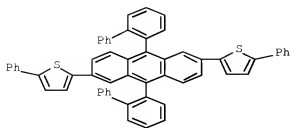
RN 624743-72-2 CAPLUS

CN Thiophene, 2,2'-(9,10-di-2-naphthalenyl-2,6-anthracenediyl)bis[5-phenyl-
(CA INDEX NAME)



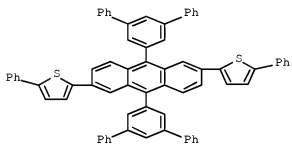
RN 624743-73-3 CAPLUS

CN Thiophene, 2,2'-[9,10-bis([1,1'-biphenyl]-2-yl)-2,6-anthracenediyl]bis[5-
phenyl- (CA INDEX NAME)



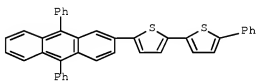
RN 624743-74-4 CAPLUS

CN Thiophene, 2,2'-[9,10-bis([1,1':3,1''-terphenyl]-5'-yl))-2,6-anthracenediyl]bis[5-phenyl- (9CI) (CA INDEX NAME)



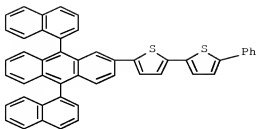
RN 624743-75-5 CAPLUS

CN 2,2'-Bithiophene, 5-(9,10-diphenyl-2-anthracenyl)-5'-phenyl- (CA INDEX NAME)



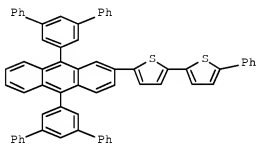
RN 624743-77-7 CAPLUS

CN 2,2'-Bithiophene, 5-(9,10-di-1-naphthalenyl-2-anthracenyl)-5'-phenyl- (CA INDEX NAME)



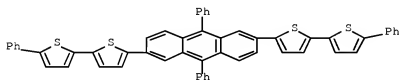
RN 624743-79-9 CAPLUS

CN 2,2'-Bithiophene, 5-[9,10-bis([1,1':3',1''-terphenyl]-5'-yl)-2-anthracenyl]-5'-phenyl- (9CI) (CA INDEX NAME)



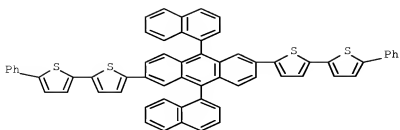
RN 624743-80-2 CAPLUS

CN 2,2'-Bithiophene, 5,5'''-(9,10-diphenyl-2,6-anthracenediyl)bis[5'-phenyl]- (9CI) (CA INDEX NAME)



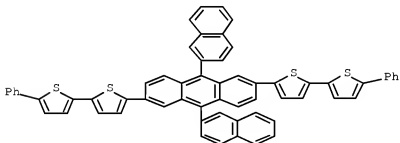
RN 624743-81-3 CAPLUS

CN 2,2'-Bithiophene, 5,5'''-(9,10-di-1-naphthalenyl-2,6-anthracenediyl)bis[5'-phenyl]- (9CI) (CA INDEX NAME)



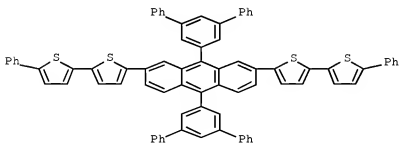
RN 624743-82-4 CAPLUS

CN 2,2'-Bithiophene, 5,5'-[(9,10-di-2-naphthalenyl-2,6-anthracenediyl)bis(5'-phenyl- (9CI) (CA INDEX NAME)



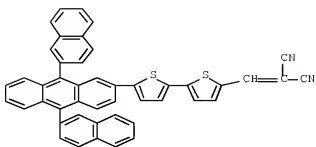
RN 624743-84-6 CAPLUS

CN 2,2'-Bithiophene, 5,5'-[9,10-bis([1,1':3',1''-terphenyl]-5'-yl)-2,7-anthracenediyl]bis(5'-phenyl- (9CI) (CA INDEX NAME)



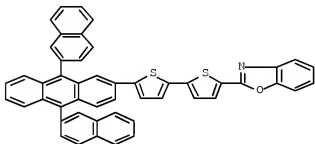
RN 624743-87-9 CAPLUS

CN Propanedinitrile, 2-[[5'-(9,10-di-2-naphthalenyl-2-anthracenyl)[2,2'-bithiophen]-5-yl]methylene]- (CA INDEX NAME)



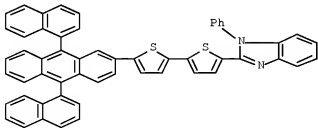
RN 624743-89-1 CAPLUS

CN Benzoxazole, 2-[5'-(9,10-di-2-naphthalenyl-2-anthracenyl)-2,2'-bithiophen]-5-yl]- (CA INDEX NAME)



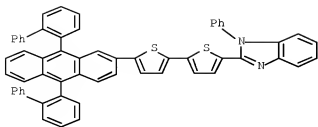
RN 624743-91-5 CAPLUS

CN 1H-Benzimidazole, 2-[5'-(9,10-di-1-naphthalenyl-2-anthracenyl)-2,2'-bithiophen]-5-yl]-1-phenyl- (CA INDEX NAME)



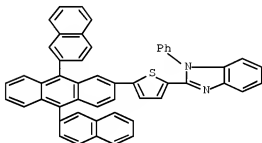
RN 624743-92-6 CAPLUS

CN 1H-Benzimidazole, 2-[5'-(9,10-bis([1,1'-biphenyl]-2-yl)-2-anthracenyl)-2,2'-bithiophen]-5-yl]-1-phenyl- (CA INDEX NAME)



RN 624743-93-7 CAPLUS

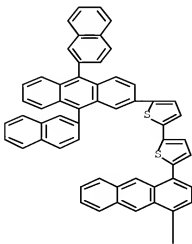
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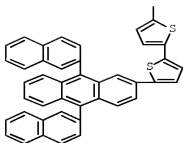


RN 624743-94-8 CAPLUS

CN 2,2'-Bithiophene, 5,5''-(1,4-anthracenediyl)bis[5'-(9,10-di-2-naphthalenyl-2-anthracenyl)-2-phenyl]- (9CI) (CA INDEX NAME)

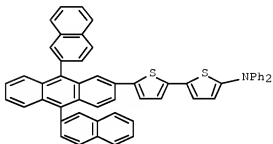
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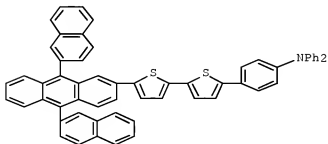
RN 624743-95-9 CAPLUS

CN [2,2'-Bithiophen]-5-amine, 5'--(9,10-di-2-naphthalenyl-2-anthracenyl)-N,N-diphenyl- (CA INDEX NAME)



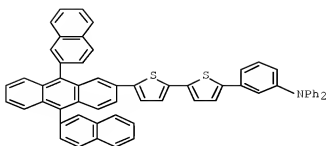
RN 624743-96-0 CAPLUS

CN Benzenamine, 4-[5'-(9,10-di-2-naphthalenyl-2-anthracenyl)-2,2'-bithiophen]-5-yl]-N,N-diphenyl- (CA INDEX NAME)



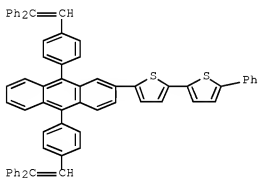
RN 624743-97-1 CAPLUS

CN Benzenamine, 3-[5'-(9,10-di-2-naphthalenyl-2-anthracenyl)-2,2'-bithiophen]-5-yl]-N,N-diphenyl- (CA INDEX NAME)



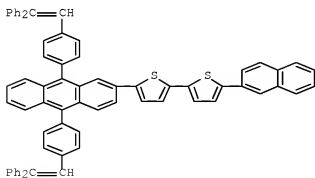
RN 624743-98-2 CAPLUS

CN 2,2'-Bithiophene, 5-[9,10-bis[4-(2,2-diphenylethenyl)phenyl]-2-anthracenyl]-5'-phenyl- (CA INDEX NAME)



RN 624743-99-3 CAPLUS

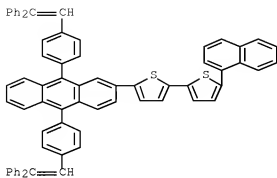
CN 2,2'-Bithiophene, 5-[9,10-bis[4-(2,2-diphenylethenyl)phenyl]-2-anthracenyl]-5'-(2-naphthalenyl)- (CA INDEX NAME)



RN 624744-00-9 CAPLUS

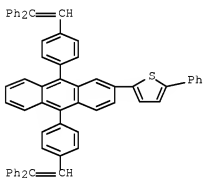
CN 2,2'-Bithiophene, 5-[9,10-bis[4-(2,2-diphenylethenyl)phenyl]-2-

anthracenyl]-5'-(1-naphthalenyl)- (CA INDEX NAME)



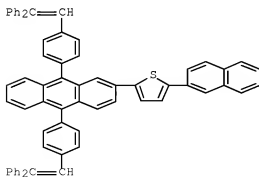
RN 624744-04-3 CAPLUS

CN Thiophene, 2-[9,10-bis[4-(2,2-diphenylethenyl)phenyl]-2-anthracenyl]-5-phenyl- (CA INDEX NAME)



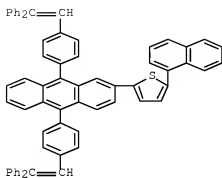
RN 624744-05-4 CAPLUS

CN Thiophene, 2-[9,10-bis[4-(2,2-diphenylethenyl)phenyl]-2-anthracenyl]-5-(2-naphthalenyl)- (CA INDEX NAME)



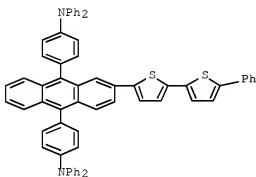
RN 624744-06-5 CAPLUS

CN Thiophene, 2-[9,10-bis[4-(2,2-diphenylethenyl)phenyl]-2-anthracenyl]-5-(1-naphthalenyl)- (CA INDEX NAME)



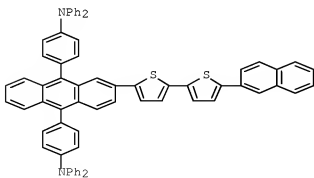
RN 624744-10-1 CAPLUS

CN Benzenamine, 4,4'-[2-(5'-phenyl[2,2'-bithiophen]-5-yl)-9,10-anthracenediyl]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



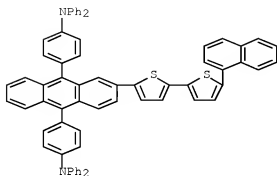
RN 624744-11-2 CAPLUS

CN Benzenamine, 4,4'-[2-[5'-(2-naphthalenyl)[2,2'-bithiophen]-5-yl]-9,10-anthracenediyl]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



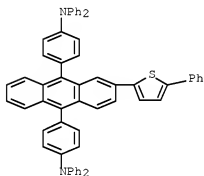
RN 624744-12-3 CAPLUS

CN Benzenamine, 4,4'-[2-{5'-(1-naphthalenyl)[2,2'-bithiophen]-5-yl}-9,10-anthracenediyl]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



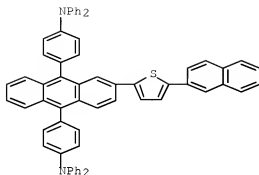
RN 624744-16-7 CAPLUS

CN Benzenamine, 4,4'-[2-(5-phenyl-2-thienyl)-9,10-anthracenediyl]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)

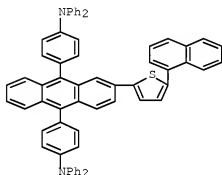


RN 624744-17-8 CAPLUS

CN Benzenamine, 4,4'-[2-[5-(2-naphthalenyl)-2-thienyl]-9,10-anthracenediyl]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



RN 624744-18-9 CAPLUS
 CN Benzenamine, 4,4'-[2-[5-(1-naphthalenyl)-2-thienyl]-9,10-anthracenediyl]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:773841 CAPLUS Full-text
 DOCUMENT NUMBER: 139:298983
 TITLE: Organic electroluminescent device and novel thiophene derivative
 INVENTOR(S): Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Totani, Yoshiyuki; Nakatsuka, Masakatsu
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 48 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003282268	A	20031003	JP 2002-112966	20020416 <--
JP 3853246	B2	20061206		

PRIORITY APPLN. INFO.: JP 2002-9104 A 20020117

OTHER SOURCE(S): MARPAT 139:298983

IT 608142-37-6P 608142-42-3P 608142-45-6P

608142-46-7P 608142-51-4P

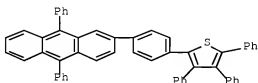
RL: DEV (Device component use); SPN (Synthetic preparation);

PREP (Preparation); USES (Uses)

(organic electroluminescent device and novel thiophene derivative)

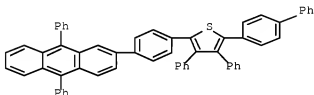
RN 608142-37-6 CAPLUS

CN Thiophene, 2-[4-(9,10-diphenyl-2-anthracenyl)phenyl]-3,4,5-triphenyl- (CA INDEX NAME)



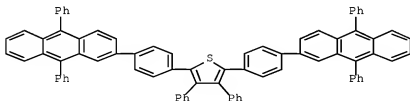
RN 608142-42-3 CAPLUS

CN Thiophene, 2-[1,1'-biphenyl]-4-yl-5-[4-(9,10-diphenyl-2-anthracenyl)phenyl]-3,4-diphenyl- (CA INDEX NAME)



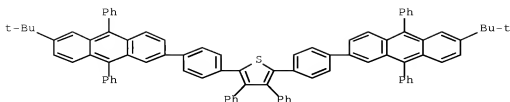
RN 608142-45-6 CAPLUS

CN Thiophene, 2,5-bis[4-(9,10-diphenyl-2-anthracenyl)phenyl]-3,4-diphenyl- (CA INDEX NAME)

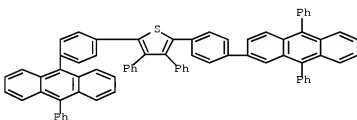


RN 608142-46-7 CAPLUS

CN Thiophene, 2,5-bis[4-(6-(1,1-dimethylethyl)-9,10-diphenyl-2-anthracenyl)phenyl]-3,4-diphenyl- (CA INDEX NAME)



RN 608142-51-4 CAPLUS
CN Thiophene, 2-[4-(9,10-diphenyl-2-anthracenyl)phenyl]-3,4-diphenyl-5-[4-(10-phenyl-9-anthracenyl)phenyl]- (CA INDEX NAME)



L13 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:173089 CAPLUS Full-text
DOCUMENT NUMBER: 138:212611
TITLE: Electroluminescent devices having diarylanthracene
ladder polymers in emissive layers
INVENTOR(S): Zheng, Shiyang; Shi, Jianmin
PATENT ASSIGNEE(S): Eastman Kodak Company, USA
SOURCE: Eur. Pat. Appl., 43 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1289029	A2	20030305	EP 2002-78394	20020816 <--
EP 1289029	A3	20070926		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 20030082401	A1	20030501	US 2001-941009	20010828 <--
US 6613457	B2	20030902		
TW 560225	B	20031101	TW 2002-91115931	20020717 <--
JP 2003115384	A	20030418	JP 2002-246882	20020827 <--
CN 1407838	A	20030402	CN 2002-142114	20020828 <--
PRIORITY APPLN. INFO.:			US 2001-941009	A 20010828
IT 474311-Q3-6DP, benzylic alc. derivative, cyclized				
RL: DEV (Device component use); SPN (Synthetic preparation);				
PREP (Preparation); USES (Uses)				
(electroluminescent devices having diarylanthracene ladder polymers in				

emissive layers)

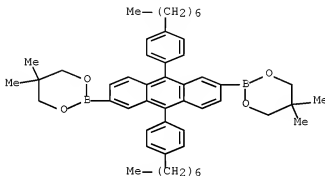
RN 474311-03-0 CAPLUS

CN Methanone, (2,5-dibromo-1,4-phenylene)bis[(4-decylphenyl)-, polymer with 2,2'-[9,10-bis(4-heptylphenyl)-2,6-anthracenediyl]bis[5,5-dimethyl-1,3,2-dioxaborinane] (9CI) (CA INDEX NAME)

CM 1

CRN 474311-02-9

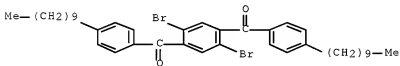
CMF C50 H64 B2 O4



CM 2

CRN 136296-63-4

CMF C40 H52 Br2 O2



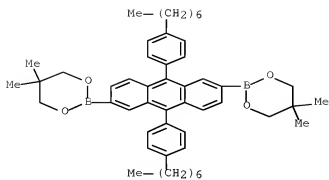
IT 474311-02-9P 474311-03-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(electroluminescent devices having diarylanthracene ladder polymers in emissive layers)

RN 474311-02-9 CAPLUS

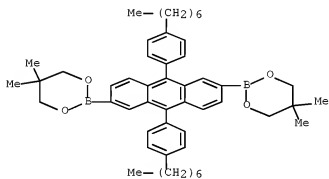
CN 1,3,2-Dioxaborinane, 2,2'-[9,10-bis(4-heptylphenyl)-2,6-anthracenediyl]bis[5,5-dimethyl- (CA INDEX NAME)



RN 474311-03-0 CAPLUS
 CN Methanone, (2,5-dibromo-1,4-phenylene)bis[(4-decylphenyl)-, polymer with
 2,2'-[9,10-bis(4-heptylphenyl)-2,6-anthracenediyl]bis[5,5-dimethyl-1,3,2-
 dioxaborinane] (9CI) (CA INDEX NAME)

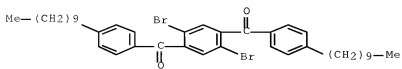
CM 1

CRN 474311-02-9
 CMF C50 H64 B2 O4



CM 2

CRN 136296-63-4
 CMF C40 H52 Br2 O2



L13 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:173005 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 138:212607

TITLE: Electroluminescent devices having diarylanthracene polymers

INVENTOR(S): Zheng, Shiyang; Shi, Jianmin; Vaeth, Kathleen M.

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: Eur. Pat. Appl., 47 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1288276	A1	20030305	EP 2002-78395	20020816 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 20030082402	A1	20030501	US 2001-941120	20010828 <--
US 6638644	B2	20031028		
JP 2003163088	A	20030606	JP 2002-246694	20020827 <--
CN 1407054	A	20030402	CN 2002-142112	20020828 <--
PRIORITY APPLN. INFO.:			US 2001-941120	A 20010828

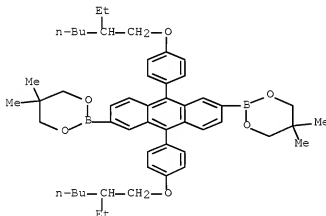
IT 500553-02-6F

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(electroluminescent devices using diarylanthracene polymers)

RN 500553-02-6 CAPLUS

CN 1,3,2-Dioxaborinane, 2,2'-[9,10-bis[4-[(2-ethylhexyl)oxy]phenyl]-2,6-anthracenediyl]bis[5,5-dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

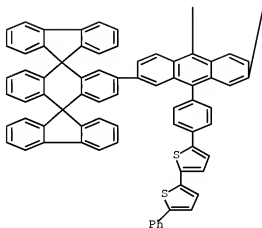
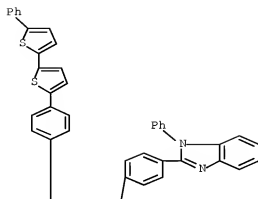
ACCESSION NUMBER: 2002:849756 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 137:360139

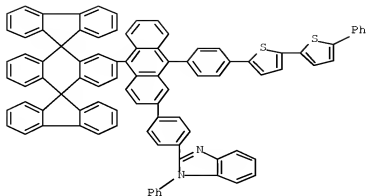
TITLE: Double-spiro organic compounds and electroluminescent devices

INVENTOR(S): Kim, Kong-Kyeum; Son, Se-Hwan; Yoon, Seok-Hee; Bae, Jae-Soon; Lee, Youn-Gu; Im, Sung-Gap; Kim, Ji-Eun; Lee, Jae-Chol
 PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
 SOURCE: PCT Int. Appl., 117 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002088274	A1	20021107	WO 2002-KR458	20020318 <--
W: CN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
KR 2002083614	A	20021104	KR 2001-23038	20010427 <--
KR 2002083615	A	20021104	KR 2001-23039	20010427 <--
US 20040023060	A1	20040205	US 2002-99781	20020314 <--
US 6998487	B2	20060214		
EP 1294823	A1	20030326	EP 2002-705589	20020318 <--
EP 1294823	B1	20061213		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004529937	T	20040930	JP 2002-585559	20020318 <--
JP 3971310	B2	20070905		
EP 1645552	A1	20060412	EP 2005-20697	20020318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
AT 348136	T	20070115	AT 2002-705589	20020318
ES 2274003	T3	20070516	ES 2002-705589	20020318
TW 591096	B	20040611	TW 2002-91105844	20020326 <--
US 20040170863	A1	20040902	US 2003-718083	20031119 <--
US 6984462	B2	20060110		
PRIORITY APPLN. INFO.:			KR 2001-23038	A 20010427
			KR 2001-23039	A 20010427
			US 2002-99781	A3 20020314
			EP 2002-705589	A3 20020318
			WO 2002-KR458	W 20020318
OTHER SOURCE(S): MARPAT 137:360139				
IT 474688-18-1 474688-20-5				
RL: DEV (Device component use); USES (Uses)				
(double-spiro organic compds. and electroluminescent devices using them)				
RN	474688-18-1 CAPLUS			
CN	1H-Benzimidazole, 2-[4-[7-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl]-9,10-bis[4-(5'-phenyl[2,2'-bithiophen]-5-yl)phenyl]-2-anthracenyl]phenyl]-1-phenyl- (9CI) (CA INDEX NAME)			



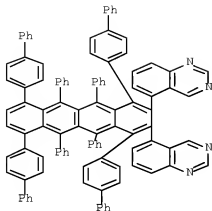
RN 474688-20-5 CAPLUS
 CN 1H-Benzimidazole, 2-[4-[10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-[4-(5'-phenyl[2,2'-bithiophen]-5-yl)phenyl]-2-anthracenyl]phenyl]-1-phenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2002:247051 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 136:286307
 TITLE: Naphthalene derivatives, organic electroluminescent devices and materials using them
 INVENTOR(S): Kanno, Masaki; Suda, Yasumasa; Onikubo, Shunichi
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002097465	A	20020402	JP 2000-289680	20000925 <--
PRIORITY APPLN. INFO.:			JP 2000-289680	20000925
OTHER SOURCE(S):	MARPAT 136:286307			
IT 405881-83-6P				
RL: DEV (Device component use); SPN (Synthetic preparation);				
PREP (Preparation); USES (Uses)				
(naphthalene derivs., organic electroluminescent devices and materials using them)				
RN 405881-83-6 CAPLUS				
CN Quinazoline, 5,5'-[1,4,7,10-tetrakis([1,1'-biphenyl]-4-yl)-5,6,11,12-tetraphenyl-2,3-naphthacenediyl]bis- (9CI) (CA INDEX NAME)				



L13 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:619060 CAPLUS Full-text

DOCUMENT NUMBER: 131:250176

TITLE: Molecular laser devices

INVENTOR(S): Wada, Yasuo

PATENT ASSIGNEE(S): Foundation for Scientific Technology Promotion, Japan; Hitachi, Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11265786	A	19990928	JP 1998-66500	19980317 <--
JP 2939461	B2	19990825		
US 6529539	B1	20030304	US 1999-267619	19990315 <--
			JP 1998-66500	A 19980317

PRIORITY APPLN. INFO.:

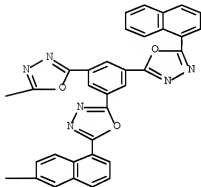
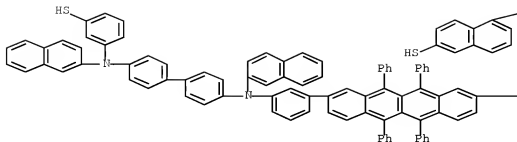
IT 244229-14-9

RL: DEV (Device component use); USES (Uses)

(phosphor-electrode chemical bonding single-mol. laser devices)

RN 244229-14-9 CAPLUS

CN 2-Naphthalenethiol, 5-[5-[3-[5-[6-[9-[3-[4'-[(3-mercaptophenyl)-2-naphthalenylamino][1,1'-biphenyl]-4-yl]-2-naphthalenylamino]phenyl]-5,6,11,12-tetraphenyl-2-naphthacenyl]-1-naphthalenyl]-1,3,4-oxadiazol-2-yl]-5-[5-(1-naphthalenyl)-1,3,4-oxadiazol-2-yl]phenyl]-1,3,4-oxadiazol-2-yl]- (CA INDEX NAME)



L13 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:693684 CAPLUS Full-text

DOCUMENT NUMBER: 130:18786

TITLE: Organic electroluminescent device material containing naphthacene derivative and organic electroluminescent device with it

INVENTOR(S): Okutsu, Satoshi; Tamano, Michiko; Onikubo, Shunichi; Enokida, Toshio

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

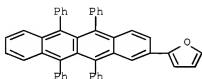
APPLICATION NO.

DATE

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JP 10289786          A      19981027      JP 1997-95406      19970414 <--
PRIORITY APPLN. INFO.:      JP 1997-95406      19970414
OTHER SOURCE(S):      MARPAT 130:18786
IT 216066-74-9
RL: DEV {Device component use}; USES (Uses)
      (organic electroluminescent device containing naphthacene compound)
RN 216066-74-9  CAPLUS
CN Furan, 2-(5,6,11,12-tetraphenyl-2-naphthacenyl)- (CA INDEX NAME)

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      custom IPC display formats
NEWS 5 JAN 28 MARPAT searching enhanced
NEWS 6 JAN 28 USGENE now provides USPTO sequence data within 3 days
      of publication
NEWS 7 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 8 JAN 28 MEDLINE and LMEEDLINE reloaded with enhancements
NEWS 9 FEB 08 STN Express, Version 8.3, now available
NEWS 10 FEB 20 PCI now available as a replacement to DPCI
NEWS 11 FEB 25 IFIREF reloaded with enhancements
NEWS 12 FEB 25 IMSPRODUCT reloaded with enhancements
NEWS 13 FEB 29 WFINDEX/WPIDS/WPIX enhanced with ECLA and current
      U.S. National Patent Classification
NEWS 14 MAR 31 IFICDB, IFIPAT, and IFIUDB enhanced with new custom
      IPC display formats
NEWS 15 MAR 31 CAS REGISTRY enhanced with additional experimental

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 NEWS 16 MAR 31 CA/Caplus and CASREACT patent number format for U.S.
 applications updated
 NEWS 17 MAR 31 LPCI now available as a replacement to LDPCI
 NEWS 18 MAR 31 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
 NEWS 19 APR 04 STN AnaVist, Version 1, to be discontinued
 NEWS 20 APR 15 WPIDS, WPINDEX, and WPIX enhanced with new
 predefined hit display formats
 NEWS 21 APR 28 EMBASE Controlled Term thesaurus enhanced
 NEWS 22 APR 28 IMSRESEARCH reloaded with enhancements

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
 AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

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	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

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STRUCTURE FILE UPDATES: 20 MAY 2008 HIGHEST RN 1021642-73-8
 DICTIONARY FILE UPDATES: 20 MAY 2008 HIGHEST RN 1021642-73-8

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TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

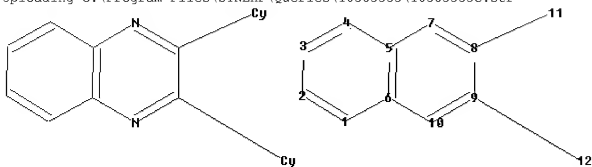
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 predicted properties as well as tags indicating availability of
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<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\STNEXP\Queries\10563353\10563353c.str



chain nodes :

11 12

ring nodes :

1 2 3 4 5 6 7 8 9 10

chain bonds :

8-11 9-12

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10

exact/norm bonds :

8-11 9-12

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

11:Atom 12:Atom

L1 STRUCTURE UPLOADED

=> s 11 sss full

FULL SEARCH INITIATED 08:34:02 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 187646 TO ITERATE

100.0% PROCESSED 187646 ITERATIONS

6382 ANSWERS

SEARCH TIME: 00.00.02

L2 6382 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

178.36

178.57

FILE 'CAPLUS' ENTERED AT 08:34:06 ON 21 MAY 2008

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FILE COVERS 1907 - 21 May 2008 VOL 148 ISS 21
FILE LAST UPDATED: 20 May 2008 (20080520/ED)

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<http://www.cas.org/legal/infopolicy.html>

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=> s l2 and dev/rl
      1670 L2
      790747 DEV/RL
L3      123 L2 AND DEV/RL

=> s l3 and electrolumin?
      81630 ELECTROLUMIN?
L4      95 L3 AND ELECTROLUMIN?

=> s l4 and py<=2004
      25083671 PY<=2004
L5      59 L4 AND PY<=2004

=> s l5 and electron transport?
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      276195 ELECTRONS
      1561744 ELECTRON
      (ELECTRON OR ELECTRONS)
      887733 TRANSPORT?
      49981 ELECTRON TRANSPORT?
      (ELECTRON(W)TRANSPORT?)
L6      30 L5 AND ELECTRON TRANSPORT?

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L6 ANSWER 1 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:752778 CAPLUS Full-text
DOCUMENT NUMBER: 141:411333
TITLE: Synthesis, Photophysics, and
Electroluminescence of New
Quinoxaline-Containing Poly(p-phenylenevinylene)s
AUTHOR(S): Karastatiris, Panayiotis; Mikroyannidis, John A.;
Spiliopoulos, Ioakim K.; Kulkarni, Abhishek P.;
Jenekhe, Samson A.
CORPORATE SOURCE: Chemical Technology Laboratory, Department of
Chemistry, University of Patras, Patras, 26500, Greece
SOURCE: Macromolecules (2004), 37(21), 867-7878
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 791114-87-9P 791114-88-0P 791114-89-1P
791114-90-4P 791114-91-5P 791114-92-6P

791114-93-7P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(synthesis, photophysics, and electroluminescence of new quinoxaline-containing poly(p-phenylenevinylene)s)

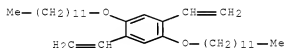
RN 791114-87-9 CAPLUS

CN Quinoxaline, 2,3-bis(4-bromophenyl)-, polymer with 1,4-bis(dodecyloxy)-2,5-diethenylbenzene (9CI) (CA INDEX NAME)

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CRN 209050-49-7

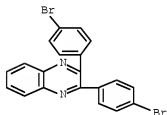
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CM 2

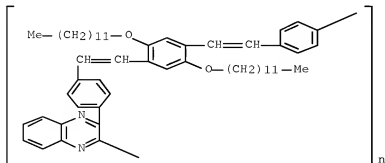
CRN 19802-70-1

CMF C20 H12 Br2 N2



RN 791114-88-0 CAPLUS

CN Poly[2,3-quinoxalinediyl-1,4-phenylene-1,2-ethenediyl[2,5-bis(dodecyloxy)-1,4-phenylene]-1,2-ethenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

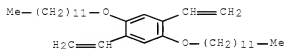


RN 791114-89-1 CAPLUS
 CN 6,6'-Biquinoxaline, 3,3'-bis(4-bromophenyl)-2,2'-diphenyl-, polymer with
 1,4-bis(dodecyloxy)-2,5-diethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 209050-49-7

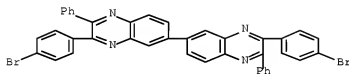
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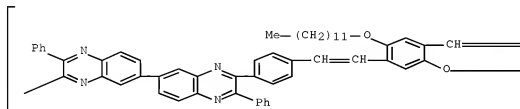
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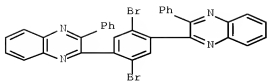
CMF C40 H24 Br2 N4



RN 791114-90-4 CAPLUS
 CN Poly[(2,2'-diphenyl[6,6'-biquinoxaline]-3,3'-diyl)-1,4-phenylene-1,2-ethenediyl[2,5-bis(dodecyloxy)-1,4-phenylene]-1,2-ethenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A

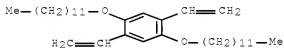




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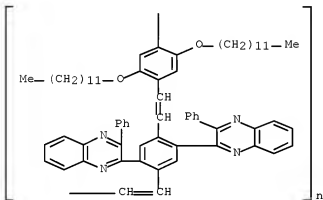
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CMF C34 H58 O2



RN 791114-93-7 CAPLUS

CN Poly[[2,5-bis(dodecyloxy)-1,4-phenylene]-1,2-ethenediyl[2,5-bis(3-phenyl-2-quinoxaliny)-1,4-phenylene]-1,2-ethenediyl] (9CI) (CA INDEX NAME)



IT 19802-70-1P 80828-97-3P 791114-84-6P

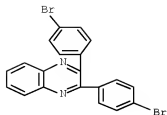
791114-86-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

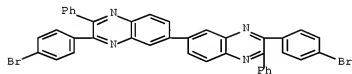
(synthesis, photophysics, and electroluminescence of new quinoxaline-containing poly(p-phenylenevinylene)s)

RN 19802-70-1 CAPLUS

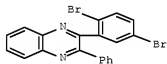
CN Quinoxaline, 2,3-bis(4-bromophenyl)- (CA INDEX NAME)



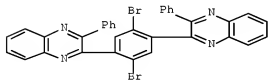
RN 80828-97-3 CAPLUS
 CN 6,6'-Biquinoxaline, 3,3'-bis(4-bromophenyl)-2,2'-diphenyl- (CA INDEX NAME)



RN 791114-84-6 CAPLUS
 CN Quinoxaline, 2-(2,5-dibromophenyl)-3-phenyl- (CA INDEX NAME)



RN 791114-86-8 CAPLUS
 CN Quinoxaline, 2,2'-(2,5-dibromo-1,4-phenylene)bis[3-phenyl- (CA INDEX NAME)



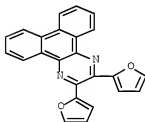
REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:428917 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 140:431154

TITLE: Quinoxaline derivative used in organic semiconductor
electroluminescent device
INVENTOR(S): Shitagaki, Satoko; Yamazaki, Hiroko; Seo, Satoshi
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004043937	A1	20040527	WO 2003-JP13764	20031028 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RM:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003275704	A1	20040603	AU 2003-275704	20031028 <--
US 20050003232	A1	20050106	US 2003-706291	20031113
US 7355340	B2	20080408		
JP 2007070361	A	20070322	JP 2006-289043	20061024
PRIORITY APPLN. INFO.:			JP 2002-329251	A 20021113
			JP 2004-551194	A3 20031028
			WO 2003-JP13764	W 20031028

OTHER SOURCE(S): MARPAT 140:431154
IT 693258-33-2P
RL: DEV (Device component use); SPN (Synthetic preparation);
PREP (Preparation); USES (Uses)
(quinoxaline derivative used in organic semiconductor
electroluminescent device)
RN 693258-33-2 CAPLUS
CN Dibenzo[f,h]quinoxaline, 2,3-di-2-furanyl- (CA INDEX NAME)



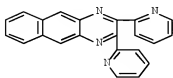
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693258-34-3P 693258-35-4P 693258-36-5P
693258-38-7P 693258-39-8P 693258-40-1P
693258-41-2P 693258-43-4P 693258-44-5P
693258-45-6P 693258-46-7P 693258-47-8P
693258-48-9P 693258-49-0P 693258-50-3P

693258-51-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(quinoxaline derivative used in organic semiconductor
electroluminescent device)

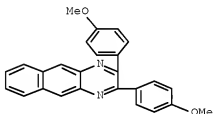
RN 857-48-7 CAPLUS

CN Benzo[g]quinoxaline, 2,3-di-2-pyridinyl- (CA INDEX NAME)



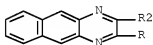
RN 36305-73-4 CAPLUS

CN Benzo[g]quinoxaline, 2,3-bis(4-methoxyphenyl)- (CA INDEX NAME)



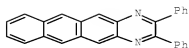
RN 476635-87-7 CAPLUS

CN Benzo[g]quinoxaline, 2,3-di-2-thienyl- (CA INDEX NAME)



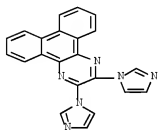
RN 693258-34-3 CAPLUS

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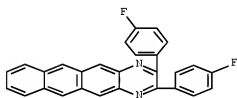
RN 693258-35-4 CAPLUS

CN Dibenzo[f,h]quinoxaline, 2,3-di-1H-imidazol-1-yl- (CA INDEX NAME)



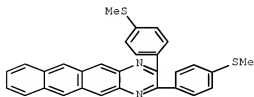
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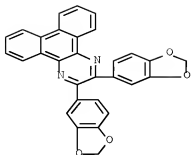
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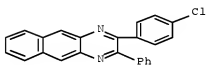
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CN Dibenzo[f,h]quinoxaline, 2,3-bis(1,3-benzodioxol-5-yl)- (CA INDEX NAME)



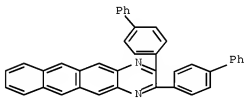
RN 693258-40-1 CAPLUS

CN Benzo[g]quinoxaline, 2-(4-chlorophenyl)-3-phenyl- (CA INDEX NAME)



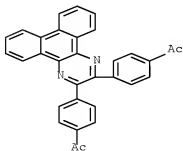
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CN Naphtho[2,3-g]quinoxaline, 2,3-bis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



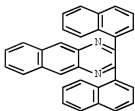
RN 693258-43-4 CAPLUS

CN Ethanone, 1,1'-(dibenzo[f,h]quinoxaline-2,3-diyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



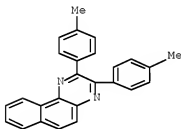
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CN Benzo[g]quinoxaline, 2,3-di-1-naphthalenyl- (CA INDEX NAME)



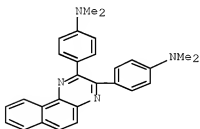
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CN Benzo[f]quinoxaline, 2,3-bis(4-methylphenyl)- (CA INDEX NAME)



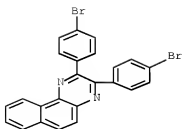
RN 693258-46-7 CAPLUS

CN Benzenamine, 4,4'-benzo[f]quinoxaline-2,3-diylbis[N,N-dimethyl- (9CI) (CA INDEX NAME)



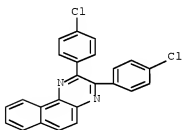
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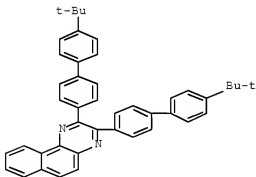
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CN Benzo[f]quinoxaline, 2,3-bis(4-chlorophenyl)- (CA INDEX NAME)



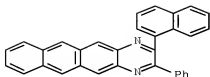
RN 693258-49-0 CAPLUS

CN Benzo[f]quinoxaline, 2,3-bis[4'-(1,1-dimethylethyl)[1,1'-biphenyl]-4-yl]-
(CA INDEX NAME)

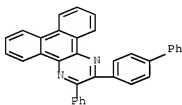


RN 693258-50-3 CAPLUS

CN Naphtho[2,3-g]quinoxaline, 2-(1-naphthalenyl)-3-phenyl- (CA INDEX NAME)



RN 693258-51-4 CAPLUS
 CN Dibenzo[f,h]quinoxaline, 2-[1,1'-biphenyl]-4-yl-3-phenyl- (CA INDEX NAME)



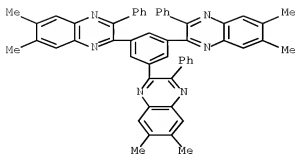
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:142647 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 140:171909
 TITLE: Organic white-light-emitting blend materials and electroluminescent devices fabricated using the same
 INVENTOR(S): Kim, Young-Chul; Cho, Hyun-Nam; Lee, Tae-Woo; Park, O-Ok; Kim, Jai-Kyeong; Yu, Jae-Woong
 PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 15 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040033388	A1	20040219	US 2003-635591	20030805 <--
KR 2004016531	A	20040225	KR 2002-48739	20020817 <--
JP 2004079535	A	20040311	JP 2003-292724	20030813 <--
US 20070069178	A1	20070329	US 2006-559191	20061113
PRIORITY APPLN. INFO.:			KR 2002-48739	A 20020817
			US 2003-635591	B1 20030805

IT 203915-07-5
 RL: DEV (Device component use); USES (Uses)
 (electron transporting layer; organic white-light-emitting blend materials and electroluminescent devices using Forster energy transfer)
 RN 203915-07-5 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[6,7-dimethyl-3-phenyl- (CA

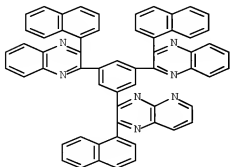
INDEX NAME)



L6 ANSWER 4 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:586746 CAPLUS Full-text
 DOCUMENT NUMBER: 139:157123
 TITLE: Electroluminescent device containing
 heterocyclic compound with condensed aromatic rings
 INVENTOR(S): Okada, Hisashi
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

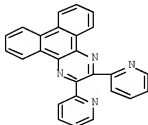
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003217856	A	20030731	JP 2002-10167	20020118 <--

PRIORITY APPLN. INFO.: JP 2002-10167 20020118
 IT 377092-14-3
 RL: DEV (Device component use); USES (Uses)
 (electroluminescent device containing heterocyclic compound with
 condensed aromatic rings)
 RN 377092-14-3 CAPLUS
 CN Pyrido[2,3-b]pyrazine, 3-[3,5-bis[3-(1-naphthalenyl)-2-
 quinoxalinyl]phenyl]-2-(1-naphthalenyl)- (CA INDEX NAME)

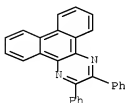


L6 ANSWER 5 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:551786 CAPLUS Full-text
 DOCUMENT NUMBER: 139:124823
 TITLE: Organic light-emitting devices employing
 dibenzoquinoxaline derivatives
 INVENTOR(S): Li, Xiao-chang Charles; Hsieh, Bing R.
 PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
 SOURCE: PCT Int. Appl., 54 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

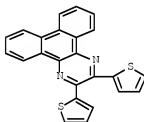
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003058667	A1	20030717	WO 2002-US41772	20021231 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 20030138662	A1	20030724	US 2001-29671	20011231 <--
US 6723445	B2	20040420		
AU 2002361905	A1	20030724	AU 2002-361905	20021231 <--
JP 2005514739	T	20050519	JP 2003-558887	20021231
JP 3903043	B2	20070411		
PRIORITY APPLN. INFO.:			US 2001-29671	A 20011231
			WO 2002-US41772	W 20021231
OTHER SOURCE(S):	MARPAT 139:124823			
IT 17401-76-2F 103307-09-1P				
RL:	DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses) (electron-transporting layer; organic light-emitting devices employing dibenzoquinoxaline derivs.)			
RN 17401-76-2 CAPLUS				
CN Dibenzo[f,h]quinoxaline, 2,3-di-2-pyridinyl- (CA INDEX NAME)				



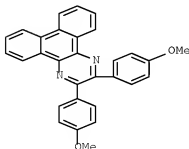
RN 103307-09-1 CAPLUS
CN Dibenzo[f,h]quinoxaline, 2,3-diphenyl- (CA INDEX NAME)



IT 562105-86-6
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(organic light-emitting devices employing dibenzoquinoxaline derivs.)
RN 562105-86-6 CAPLUS
CN Dibenzo[f,h]quinoxaline, 2,3-di-2-thienyl- (CA INDEX NAME)



IT 562105-85-5P
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(organic light-emitting devices employing dibenzoquinoxaline derivs.)
RN 562105-85-5 CAPLUS
CN Dibenzo[f,h]quinoxaline, 2,3-bis(4-methoxyphenyl)- (CA INDEX NAME)

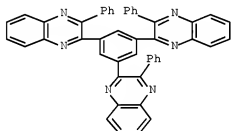


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:219419 CAPLUS Full-text
DOCUMENT NUMBER: 138:245304
TITLE: Structures and properties of organic electroluminescent devices
INVENTOR(S): Kitazawa, Daisuke; Kohama, Toru; Tominaga, Takeshi
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2003086381	A	20030320	JP 2001-271543	20010907 <--

PRIORITY APPLN. INFO.: JP 2001-271543 20010907
IT 203915-06-4
RL: DEV (Device component use); USES (Uses)
(structures and properties of organic electroluminescent devices)
RN 203915-06-4 CAPLUS
CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl- (CA INDEX NAME)



L6 ANSWER 7 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:849756 CAPLUS Full-text
DOCUMENT NUMBER: 137:360139
TITLE: Double-spiro organic compounds and electroluminescent devices
INVENTOR(S): Kim, Kong-Kyeum; Son, Se-Hwan; Yoon, Seok-Hee; Bae, Jae-Soon; Lee, Youn-Gu; Im, Sung-Gap; Kim, Ji-Eun; Lee, Jae-Chol
PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
SOURCE: PCT Int. Appl., 117 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002088274	A1	20021107	WO 2002-KR458	20020318 <--
W: CN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
KR 2002083614	A	20021104	KR 2001-23038	20010427 <--
KR 2002083615	A	20021104	KR 2001-23039	20010427 <--
US 20040023060	A1	20040205	US 2002-99781	20020314 <--
US 6998487	B2	20060214		
EP 1294823	A1	20030326	EP 2002-705589	20020318 <--
EP 1294823	B1	20061213		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004529937	T	20040930	JP 2002-585559	20020318 <--
JP 3971310	B2	20070905		
EP 1645552	A1	20060412	EP 2005-20697	20020318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
AT 348136	T	20070115	AT 2002-705589	20020318
ES 2274003	T3	20070516	ES 2002-705589	20020318
TW 591096	B	20040611	TW 2002-91105844	20020326 <--
US 20040170863	A1	20040902	US 2003-718083	20031119 <--
US 6984462	B2	20060110		
PRIORITY APPLN. INFO.:			KR 2001-23038	A 20010427
			KR 2001-23039	A 20010427
			US 2002-99781	A3 20020314
			EP 2002-705589	A3 20020318
			WO 2002-KR458	W 20020318

OTHER SOURCE(S): MARPAT 137:360139

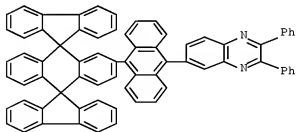
IT 474688-29-4 474688-35-2 474688-38-5

RL: DEV (Device component use); USES (Uses)

(double-spiro organic compds. and electroluminescent devices using them)

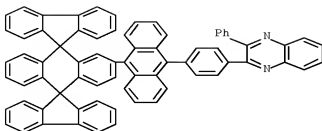
RN 474688-29-4 CAPLUS

CN Quinoxaline, 2-[4-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracenyl)phenyl]-3-phenyl- (9CI) (CA INDEX NAME)

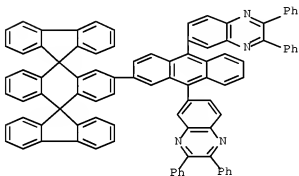


RN 474688-35-2 CAPLUS

CN Quinoxaline, 2-[4-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracenyl)phenyl]-3-phenyl- (9CI) (CA INDEX NAME)



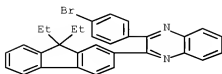
RN 474688-38-5 CAPLUS
 CN Quinoxaline, 6,6'-(2-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluorene]-2'-yl-9,10-anthracenediyl)bis[2,3-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

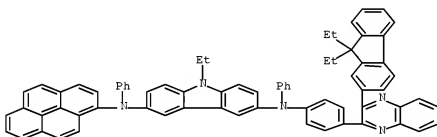
L6 ANSWER 8 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2002:587825 CAPLUS Full-text
 DOCUMENT NUMBER: 137:301792
 TITLE: Green and Yellow Electroluminescent Dipolar Carbazole Derivatives: Features and Benefits of Electron-Withdrawing Segments
 AUTHOR(S): Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Chuen, Chang-Hao
 CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Nankang, 115, Taiwan
 SOURCE: Chemistry of Materials (2002), 14(9), 3852-3859
 CODEN: CMATEX; ISSN: 0897-4756
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 463062-35-3 468062-36-4 463062-37-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (green and yellow electroluminescent dipolar carbazole derivs. and their electrochem. and spectral and luminescent properties affected by electron-withdrawing segments)
 RN 468062-35-3 CAPLUS

CN Quinoxaline, 2-(4-bromophenyl)-3-(9,9-diethyl-9H-fluoren-2-yl)- (CA INDEX NAME)



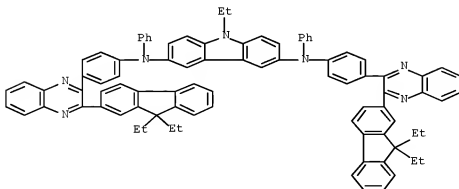
RN 468062-36-4 CAPLUS

CN 9H-Carbazole-3,6-diamine, N-[4-[3-(9,9-diethyl-9H-fluoren-2-yl)-2-quinoxaliny]phenyl]-9-ethyl-N,N'-diphenyl-N'-1-pyrenyl- (9CI) (CA INDEX NAME)



RN 468062-37-5 CAPLUS

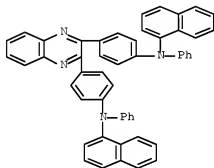
CN 9H-Carbazole-3,6-diamine, N,N'-bis[4-[3-(9,9-diethyl-9H-fluoren-2-yl)-2-quinoxaliny]phenyl]-9-ethyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)



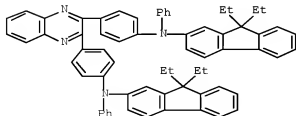
REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 30 CAPLUS COPYRIGHT 2008 ACS ON STN
ACCESSION NUMBER: 2002:329583 CAPLUS Full-text

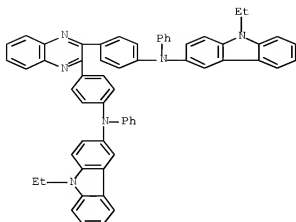
DOCUMENT NUMBER: 137:39058
 TITLE: Quinoxalines Incorporating Triarylamines: Potential Electroluminescent Materials with Tunable Emission Characteristics
 AUTHOR(S): Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Chuen, Chang-Hao
 CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Taipei, Taiwan
 SOURCE: Chemistry of Materials (2002), 14(6), 2796-2802
 CODEN: CMATEX; ISSN: 0897-4756
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 436800-49-6 436800-51-0 436800-53-2
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (quinoxalines incorporating triarylamines as potential electroluminescent materials with tunable emission characteristics)
 RN 436800-49-6 CAPLUS
 CN 1-Naphthalenamine, N,N'-(2,3-quinoxalinediyl-di-4,1-phenylene)bis(N-phenyl- (9CI) (CA INDEX NAME)



RN 436800-51-0 CAPLUS
 CN 9H-Fluoren-2-amine, N,N'-(2,3-quinoxalinediyl-di-4,1-phenylene)bis[9,9-diethyl-N-phenyl- (9CI) (CA INDEX NAME)



RN 436800-53-2 CAPLUS
 CN 9H-Carbazol-3-amine, N,N'-(2,3-quinoxalinediyl-di-4,1-phenylene)bis[9-ethyl-N-phenyl- (CA INDEX NAME)

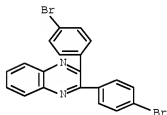


IT 19802-70-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(quinoxalines incorporating triarylamines as potential
electroluminescent materials with tunable emission
characteristics)

RN 19802-70-1 CAPLUS

CN Quinoxaline, 2,3-bis(4-bromophenyl)- (CA INDEX NAME)



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:853874 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 136:158094

TITLE: Ultraviolet photoelectron spectroscopy on new
heterocyclic materials for multilayer organic light
emitting diodes

AUTHOR(S): Casu, M. B.; Imperia, P.; Schrader, S.; Falk, B.;
Jandke, M.; Strohmriegl, P.

CORPORATE SOURCE: Institut für Physik, Universität Potsdam, Potsdam,
D-14469, Germany

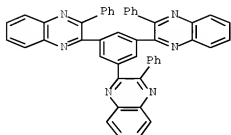
SOURCE: Synthetic Metals (2001), 124(1), 79-81

CODEN: SYMEDZ; ISSN: 0379-6779

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English
 IT 214132-60-2
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (UPS on new heterocyclic materials for multilayer organic light emitting diodes)
 RN 214132-60-2 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl-6(or 7)-(trifluoromethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 30 CAPLUS COPYRIGHT 2008 ACS on SIN
 ACCESSION NUMBER: 2001:730906 CAPLUS Full-text
 DOCUMENT NUMBER: 135:280269
 TITLE: Electroluminescent devices employing organic luminescent material/clay nanocomposites
 INVENTOR(S): Park, O-Ok; Lee, Tae-Woo
 PATENT ASSIGNEE(S): Korea Advanced Institute of Science and Technology, S. Korea
 SOURCE: PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001072925	A1	20011004	WO 2001-KR534	20010330 <--
W: DE, JP, KR, US				
KR 2001095437	A	20011107	KR 2000-16466	20000330 <--
DE 10191387	T0	20020801	DE 2001-10191387	20010330 <--
JP 2003528971	T	20030930	JP 2001-571842	20010330 <--
KR 2002026860	A	20020412	KR 2001-705364	20010427 <--
US 20020041151	A1	20020411	US 2001-995950	20011127 <--
US 6593688	B2	20030715		
US 20030211359	A1	20031113	US 2003-442861	20030520 <--
PRIORITY APPLN. INFO.:			KR 2000-16466	A 20000330

WO 2001-KR534
US 2001-995950

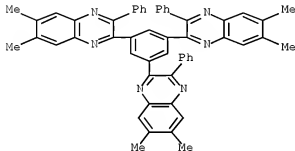
W 20010330
A1 20011127

IT 203915-07-5

RL: DEV (Device component use); USES (Uses)
(electron-transporting layer;
electroluminescent devices employing organic luminescent
material/clay nanocomposites containing)

RN 203915-07-5 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[6,7-dimethyl-3-phenyl- (CA
INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:376190 CAPLUS Full-text

DOCUMENT NUMBER: 135:172764

TITLE: Electronic transport properties of heterocyclic
materials for heterolayer organic light emitting
devices

AUTHOR(S): Imperia, P.; Casu, M. B.; Schrader, S.; Falk, B.;
Jandke, M.; Strohrriegl, P.

CORPORATE SOURCE: Institut fur Physik, Universitat Potsdam, Potsdam,
D-14469, Germany

SOURCE: Synthetic Metals (2001), 121(1-3), 1673-1674
CODEN: SYMEDZ; ISSN: 0379-6779

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

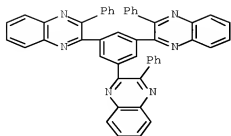
LANGUAGE: English

IT 214132-60-2

RL: DEV (Device component use); PRP (Properties); USES (Uses)
(electronic transport properties of heterocyclic materials for
heterolayer organic light emitting devices)

RN 214132-60-2 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl-6(or
7)-(trifluoromethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:169755 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 134:359245

TITLE: Polymeric light-emitting diodes based on poly(p-phenylene ethynylene), poly(triphenyldiamine), and spiroquinoxaline

AUTHOR(S): Schmitz, Christoph; Posch, Peter; Thelakkat, Mukundan; Schmidt, Hans-Werner; Montali, Andrea; Feldman, Kirill; Smith, Paul; Weder, Christoph

CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuther Institut fur Makromolekulforschung (BIMF) Universitat Bayreuth, Bayreuth, D-95440, Germany

SOURCE: Advanced Functional Materials (2001), 11(1), 41-46

CODEN: AFMDC6; ISSN: 1616-301X

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

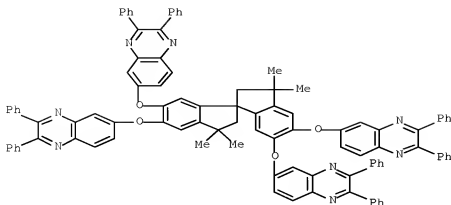
LANGUAGE: English

IT 227099-97-0

RL: DEV (Device component use); PRP (Properties); USES (Uses) (spiroquinoxaline, hole blocking layer; optimization of device structures of LEDs based on poly(p-phenylene ethynylene) emitter poly(triphenyldiamine) hole transport and spiroquinoxaline hole blocking layers)

RN 227099-97-0 CAPLUS

CN Quinoxaline, 6,6',6'',6'''-[(2,2',3,3'-tetrahydro-3,3',3'-tetramethyl-1,1'-spirobi[1H-indene]-5,5',6,6'-tetrayl)tetrakis(oxy)]tetrakis[2,3-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 14 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:819765 CAPLUS Full-text

DOCUMENT NUMBER: 134:92846

TITLE: Luminescence properties and energy transfer processes in fluorescent and phosphorescent tris(phenylquinoxaline)

AUTHOR(S): Blumstengel, Sylke; Colabella, Elio; Tubino, Riccardo; Jandke, M.; Strohhriegl, P.

CORPORATE SOURCE: INFN and Dipartimento di Scienza dei Materiali, Universita di Milano-Bicocca, Milan, 20125, Italy

SOURCE: Materials Research Society Symposium Proceedings (2000), 598(Electrical, Optical, and Magnetic Properties of Organic Solid-State Materials V), BB3.32/1-BB3.32/6

CODEN: MRSPDH; ISSN: 0272-9172

PUBLISHER: Materials Research Society

DOCUMENT TYPE: Journal

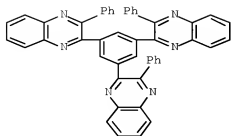
LANGUAGE: English

IT 214132-60-2

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses) (luminescence properties and energy transfer processes in fluorescent and phosphorescent tris(phenylquinoxaline))

RN 214132-60-2 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl-6(or 7)-(trifluoromethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:579924 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 133:200649

TITLE: Zinc coordination compound containing quinoxaline derivative as ligand for organic electroluminescent device

INVENTOR(S): Iwasaki, Shuji

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000229952	A	20000822	JP 1999-34103	19990212 <--
PRIORITY APPLN. INFO.:			JP 1999-34103	19990212

OTHER SOURCE(S): MARPAT 133:200649

IT 251353-89-6P 288840-07-3P

RL: DEV (Device component use); IMF (Industrial manufacture);

TEM (Technical or engineered material use); PREP (Preparation); USES

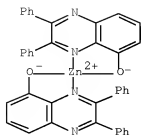
(Uses)

(Zn coordination compound containing quinoxaline derivative as ligand for organic

electroluminescent device for low driving voltage)

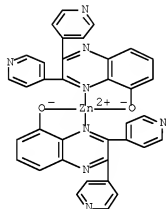
RN 251353-89-6 CAPLUS

CN Zinc, bis(2,3-diphenyl-5-quinoxalinolato-κN4,κO5)-, (T-4)-
(CA INDEX NAME)



RN 288840-07-3 CAPLUS

CN Zinc, bis(2,3-di-4-pyridinyl-5-quinoxalinolato-kN4,kO5)-,
(T-4)- (CA INDEX NAME)



L6 ANSWER 16 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:553664 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 133:170118

TITLE: Fluorene copolymers and devices made therefrom

INVENTOR(S): Inbasekaran, Michael; Woo, Edmund P.; Wu, Weishi;
Bernius, Mark T.

PATENT ASSIGNEE(S): Dow Chemical Company, USA

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000046321	A1	20000810	WO 1999-US7876	19990409 <--
W: CA, CN, JP, KR, SG				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				
PT, SE				
CA 2360644	A1	20000810	CA 1999-2360644	19990409 <--

EP 1155096	A1	20011121	EP 1999-916596	19990409 <--
EP 1155096	B1	20050309		
R: DE, FR, GB, IT, NL				
US 6353083	B1	20020305	US 1999-289344	19990409 <--
JP 2002536492	T	20021029	JP 2000-597384	19990409 <--
TW 577910	B	20040301	TW 1999-88106303	19990420 <--
PRIORITY APPLN. INFO.:			US 1999-118799P	P 19990204
			WO 1999-US7876	W 19990409

IT 268073-52-9P
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (fluorene derivative copolymers and devices using them)

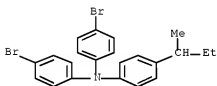
RN 288073-52-9 CAPLUS

CN Benzenamine, N,N-bis(4-bromophenyl)-4-(1-methylpropyl)-, polymer with 5,8-dibromo-2,3-diphenylquinoxaline and 2,2'-(9,9-dioctyl-9H-fluorene-2,7-diyl)bis[1,3,2-dioxaborolane] (9CI) (CA INDEX NAME)

CM 1

CRN 287976-94-7

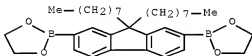
CMF C22 H21 Br2 N



CM 2

CRN 210347-49-2

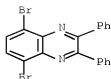
CMF C33 H48 B2 O4



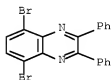
CM 3

CRN 94544-77-1

CMF C20 H12 Br2 N2

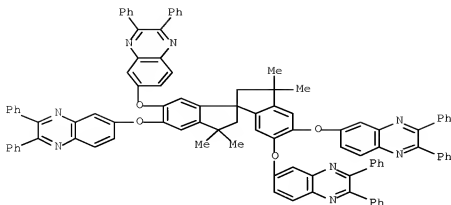


IT 94544-77-1P, 5,8-Dibromo-2,3-diphenylquinoxaline
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (monomer; fluorene derivative copolymers and devices using them)
 RN 94544-77-1 CAPLUS
 CN Quinoxaline, 5,8-dibromo-2,3-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 17 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:462283 CAPLUS Full-text
 DOCUMENT NUMBER: 133:273894
 TITLE: Efficient screening of electron
 transport material in multilayer organic
 light-emitting diodes by combinatorial methods
 AUTHOR(S): Schmitz, Christoph; Poesch, Peter; Thelakkat,
 Mukundan; Schmidt, Hans-Werner
 CORPORATE SOURCE: Lehrstuhl Makromol. Chem. I und Bayreuther Inst.
 Makromolekulforschung (BIMF), Univ. Bayreuth,
 Bayreuth, Germany
 SOURCE: Proceedings of SPIE-The International Society for
 Optical Engineering (1999), 3797(Organic
 Light-Emitting Materials and Devices III), 423-431
 CODEN: PSISDG; ISSN: 0277-786X
 PUBLISHER: SPIE-The International Society for Optical Engineering
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 227099-97-0
 RL: DEV (Device component use); PEP (Physical, engineering or
 chemical process); PRP (Properties); PROC (Process); USES (Uses)
 (efficient screening of electron transport material
 in multilayer organic light-emitting diodes by combinatorial methods)
 RN 227099-97-0 CAPLUS
 CN Quinoxaline, 6,6',6'',6'''-[(2,2',3,3'-tetrahydro-3,3',3',3'-tetramethyl-
 1,1'-spirobi[1H-indene]-5,5',6,6'-tetrayl)tetrakis(oxy)]tetrakis[2,3-
 diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 18 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:462260 CAPLUS Full-text

DOCUMENT NUMBER: 133:288499

TITLE: Organic light-emitting devices based on new heterocyclic compounds

AUTHOR(S): Schrader, Sigurd K.; Imperia, Paolo; Koch, Norbert; Leising, Guenther; Falk, B.

CORPORATE SOURCE: Institute of Physics, Dep. Condensed Matter Phys., Univ. Potsdam, Potsdam, Germany

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1999), 3797(Organic Light-Emitting Materials and Devices III), 209-220
CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

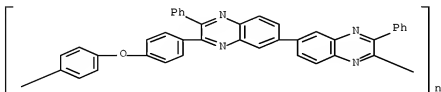
LANGUAGE: English

IT 75855-89-9

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(organic light-emitting devices based on new heterocyclic compds.)

RN 75855-89-9 CAPLUS

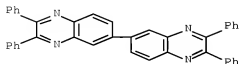
CN Poly[(2',3'-diphenyl[6,6'-biquinoxaline]-2,3'-diyl)-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



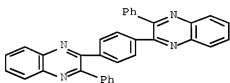
IT 16111-01-6 41758-31-0 236392-92-0

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(organic light-emitting devices based on new heterocyclic compds.)

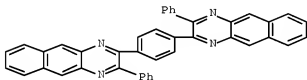
RN 16111-01-6 CAPLUS
CN 6,6'-Bi(quinoxaline, 2,2',3,3'-tetraphenyl- (CA INDEX NAME)



RN 41758-31-0 CAPLUS
CN Quinoxaline, 2,2'-(1,4-phenylene)bis[3-phenyl- (CA INDEX NAME)



RN 236392-92-0 CAPLUS
CN Benzo[g]quinoxaline, 2,2'-(1,4-phenylene)bis[3-phenyl- (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

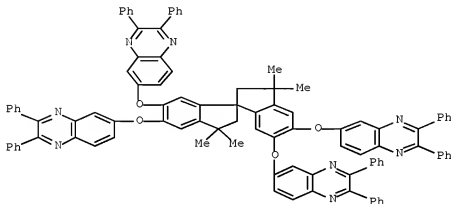
L6 ANSWER 19 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:420226 CAPLUS [Full-text](#)
DOCUMENT NUMBER: 133:111687
TITLE: Efficient screening of materials and fast optimization of vapor deposited OLED characteristics
AUTHOR(S): Schmitz, Christoph; Posch, Peter; Thelakkat, Mukundan; Schmidt, Hans-Werner
CORPORATE SOURCE: Makromolekulare Chemie I, Universitat Bayreuth and Bayreuther Institut fur Makromolekulforschung (BIMF), Bayreuth, D-95440, Germany
SOURCE: Macromolecular Symposia (2000), 154(Polymers in Display Applications), 209-221
CODEN: MSYMEC; ISSN: 1022-1360
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 2.27699-97-0

RL: DEV (Device component use); USES (Uses)

(efficient screening of materials and fast optimization of vapor deposited LED characteristics containing)

RN 227099-97-0 CAPLUS

CN Quinoxaline, 6,6',6'',6'''-(2,2',3,3'-tetrahydro-3,3',3'-tetramethyl-1,1'-spirobi[1H-indene]-5,5',6,6'-tetrayl)tetrakis(oxy)]tetrakis[2,3-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 20 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:313703 CAPLUS Full-text

DOCUMENT NUMBER: 132:327521

TITLE: Organic electroluminescent device and its production method

INVENTOR(S): Kawamura, Hisayuki; Hosokawa, Chishio

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000133453	A	20000512	JP 1998-301212	19981022 <--
PRIORITY APPLN. INFO.:			JP 1998-301212	19981022

OTHER SOURCE(S): MARPAT 132:327521

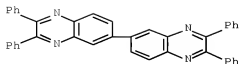
IT 16111-01-6

RL: DEV (Device component use); USES (Uses)

(organic electroluminescent device and its production method)

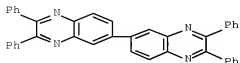
RN 16111-01-6 CAPLUS

CN 6,6'-Biquinoxaline, 2,2',3,3'-tetraphenyl- (CA INDEX NAME)

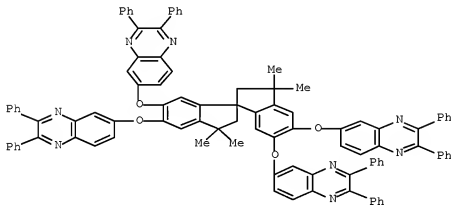


L6 ANSWER 21 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:659170 CAPLUS Full-text
 DOCUMENT NUMBER: 131:293117
 TITLE: Organic electroluminescent device
 INVENTOR(S): Nakamura, Hiroaki; Hosokawa, Chishio; Fukuoka, Kenichi; Tokailin, Hiroshi
 PATENT ASSIGNEE(S): Idemitsu Kosan Company Limited, Japan
 SOURCE: Eur. Pat. Appl., 38 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 949696	A2	19991013	EP 1999-106151	19990407 <--
EP 949696	A3	20050601		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11354283	A	19991224	JP 1998-257275	19980910 <--
JP 3266573	B2	20020318		
JP 2002231455	A	20020816	JP 2001-370225	19980910 <--
TW 417312	B	20010101	TW 1999-88103676	19990310 <--
US 6509109	B1	20030121	US 1999-281953	19990331 <--
CN 1236825	A	19991201	CN 1999-104852	19990408 <--
CN 1770939	A	20060510	CN 2005-10092697	19990408
PRIORITY APPLN. INFO.:				
			JP 1998-96220	A 19980408
			JP 1998-114123	A 19980409
			JP 1998-257275	A 19980910
			JP 1998-6220	A 19980408
			JP 1998-4123	A 19980409
			JP 1998-7275	A 19980910
			CN 1999-104852	A3 19990408
IT 16111-01-6				
RL: DEV (Device component use); USES (Uses) (organic electroluminescent devices with electron-injecting regions containing reducing dopants)				
RN 16111-01-6 CAPLUS				
CN 6,6'-Biquinoxaline, 2,2',3,3'-tetraphenyl- (CA INDEX NAME)				



L6 ANSWER 22 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:559270 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 131:329778
 TITLE: Combinatorial methods for screening and optimization of materials and device parameters in OLEDs
 AUTHOR(S): Schmitz, Christoph; Posch, Peter; Thelakkat, Mukundan; Schmidt, Hans-Werner
 CORPORATE SOURCE: Makromolekulare Chemie I, Universitat Bayreuth and Bayreuther Institut, Bayreuth, D-95440, Germany
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(2), 1182-1183
 PUBLISHER: CODEN: ACPAY; ISSN: 0032-3934
 DOCUMENT TYPE: American Chemical Society, Division of Polymer Chemistry
 LANGUAGE: Journal
 IT 227099-97-0 English
 RL: DEV (Device component use); USES (Uses)
 (combinatorial methods for screening and optimization of materials and device parameters in organic-LEDs)
 RN 227099-97-0 CAPLUS
 CN Quinoxaline, 6,6',6'',6'''-[(2,2',3,3'-tetrahydro-3,3',3'-tetramethyl-1,1'-spirobi[1H-indene]-5,5',6,6'-tetrayl)tetrakis(oxy)]tetrakis[2,3-diphenyl- (9CI) (CA INDEX NAME)]



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 23 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:456291 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 131:191798
 TITLE: Novel low-molar-mass glasses for photorefractive and electroluminescent applications
 AUTHOR(S): Hohle, C.; Jandke, M.; Schlöter, S.; Koch, N.; Resel, R.; Haarer, D.; Strohmriegel, P.
 CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuther Institut für Makromolekulforschung (BIMF), Universitat Bayreuth, Bayreuth, D-95440, Germany
 SOURCE: Synthetic Metals (1999), 102(1-3), 1535-1536

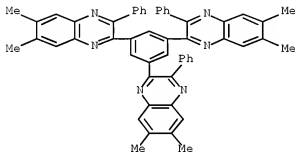
PUBLISHER: CODEN: SYMEDZ; ISSN: 0379-6779
Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 203915-07-5 214132-60-2 238753-75-8
246126-07-2

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(novel low-molar-mass glasses for photorefractive and electroluminescent applications)

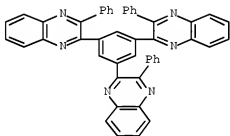
RN 203915-07-5 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[6,7-dimethyl-3-phenyl- (CA INDEX NAME)



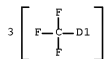
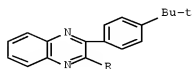
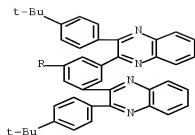
RN 214132-60-2 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl-6(or 7)-(trifluoromethyl)- (9CI) (CA INDEX NAME)

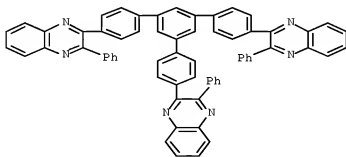


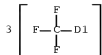
RN 238753-75-8 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-[4-(1,1-dimethylethyl)phenyl](trifluoromethyl)- (9CI) (CA INDEX NAME)



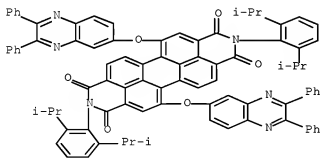
RN 240126-07-2 CAPLUS
 CN Quinoxaline, 2,2'-[5'-[4-[3-phenyl-6(or 7)-(trifluoromethyl)-2-
 quinoxaliny]phenyl][1,1':3',1''-terphenyl]-4,4''-diyl]bis[3-phenyl-6(or
 7)-(trifluoromethyl)- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

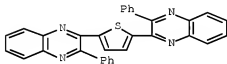
L6 ANSWER 24 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:456087 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 131:163098
 TITLE: Perylenediimides with electron transport moieties for electroluminescent devices
 AUTHOR(S): Posch, P.; Thelakkat, M.; Schmidt, H.-W.
 CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuther Institut für Makromolekulforschung (BIMF), Universität Bayreuth, Bayreuth, 95440, Germany
 SOURCE: Synthetic Metals (1999), 102(1-3), 1110-1112
 CODEN: SYMEDZ; ISSN: 0379-6779
 PUBLISHER: Elsevier Science S.A.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 237426-41-4
 RL: PRP (Properties)
 (LUMO from cyclic voltammetry related to perylenediimide co-polymer light emitting diodes)
 RN 237426-41-4 CAPLUS
 CN Anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10(2H,9H)-tetrone, 2,9-bis[2,6-bis(1-methylethyl)phenyl]-5,12-bis[(2,3-diphenyl-6-quininoxalinyloxy)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

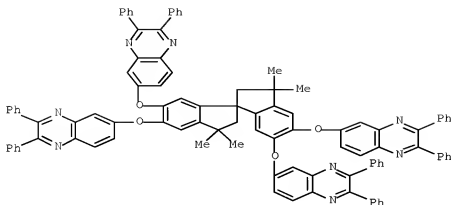
L6 ANSWER 25 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:286813 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 131:88270
 TITLE: Thiophene-Linked Polyphenylquinoxaline: A New Electron Transport Conjugated

Polymer for Electroluminescent Devices
 AUTHOR(S): Cui, Yuanting; Zhang, Xuejun; Jenekhe, Samson A.
 CORPORATE SOURCE: Departments of Chemical Engineering and Chemistry,
 University of Rochester, Rochester, NY, 14627-0166,
 USA
 SOURCE: Macromolecules (1999), 32(11), 3824-3826
 CODEN: MAMOBX; ISSN: 0024-9297
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 229477-58-1P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (oligoquinoxaline; preparation and electron transport of
 poly(thiophene-phenylquinoxaline) conjugated polymer and performance in
 LED structures)
 RN 229477-58-1 CAPLUS
 CN Quinoxaline, 2,2'-(2,5-thiophenediyl)bis[3-phenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 26 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:242029 CAPLUS Full-text
 DOCUMENT NUMBER: 131:51719
 TITLE: Efficient screening of electron
 transport material in multi-layer organic
 light emitting diodes by combinatorial methods
 AUTHOR(S): Schmitz, Christoph; Posch, Peter; Thelakkat, Mukundan;
 Schmidt, Hans-Werner
 CORPORATE SOURCE: Lehrstuhl für Makromolekulare Chemie I und Bayreuther
 Institut für Makromolekulforschung (BIMF), Universität
 Bayreuth, Bayreuth, 95447, Germany
 SOURCE: Physical Chemistry Chemical Physics (1999),
 1(8), 1777-1781
 CODEN: PPCPFQ; ISSN: 1463-9076
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 227099-97-0
 RL: DEV (Device component use); USES (Uses)
 (efficient screening of electron transport material
 in multi-layer organic light emitting diodes by combinatorial methods)
 RN 227099-97-0 CAPLUS
 CN Quinoxaline, 6,6',6'',6'''-[(2,2',3,3'-tetrahydro-3,3,3',3'-tetramethyl-
 1,1'-spirobi[1H-indene]-5,5',6,6'-tetrayl)tetrakis(oxy)]tetrakis[2,3-
 diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 27 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:572945 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 129:290672

TITLE: Phenylquinoxaline Polymers and Low Molar Mass Glasses as Electron-Transport Materials in Organic Light-Emitting Diodes

AUTHOR(S): Jandke, Markus; Strohmriegel, Peter; Berleb, Stefan; Werner, Ekkehard; Bruetting, Wolfgang

CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuther Institute, Universitaet Bayreuth, Bayreuth, 95440, Germany

SOURCE: Macromolecules (1998), 31(19), 6434-6443

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 203915-06-4P 213965-06-1P 213965-07-2P

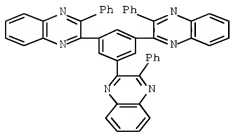
213965-12-9P 214132-59-9P 214132-60-2P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(synthesis of phenylquinoxaline low molar mass glasses as electron-transport materials in organic light-emitting diodes)

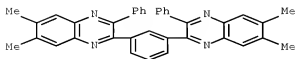
RN 203915-06-4 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl- (CA INDEX NAME)



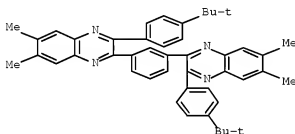
RN 213965-06-1 CAPLUS

CN Quinoxaline, 2,2'-(1,3-phenylene)bis[6,7-dimethyl-3-phenyl- (CA INDEX NAME)



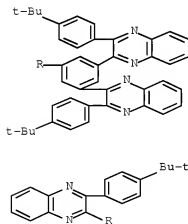
RN 213965-07-2 CAPLUS

CN Quinoxaline, 2,2'-(1,3-phenylene)bis[3-[4-(1,1-dimethylethyl)phenyl]-6,7-dimethyl- (CA INDEX NAME)



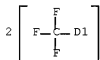
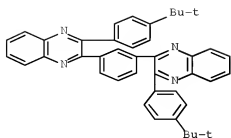
RN 213965-12-9 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)

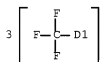
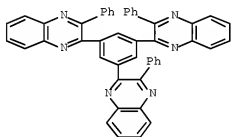


RN 214132-59-9 CAPLUS

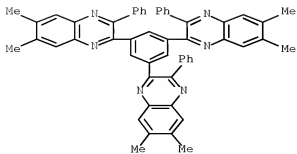
CN Quinoxaline, 2,2'-(1,3-phenylene)bis[3-[4-(1,1-dimethylethyl)phenyl]-6(or 7)-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 214132-60-2 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl-6(or 7)-(trifluoromethyl)- (9CI) (CA INDEX NAME)

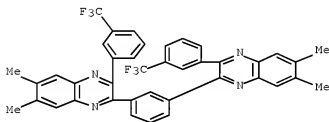


IT 203915-07-5P 213965-08-3P 213965-13-0P
 214132-58-8P 214132-61-3P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis of phenylquinoxaline low molar mass glasses as
 electron-transport materials in organic light-emitting
 diodes)
 RN 203915-07-5 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[6,7-dimethyl-3-phenyl- (CA
 INDEX NAME)



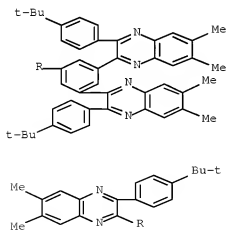
RN 213965-08-3 CAPLUS

CN Quinoxaline, 2,2'-(1,3-phenylene)bis[6,7-dimethyl-3-[3-(trifluoromethyl)phenyl]- (CA INDEX NAME)



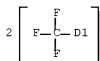
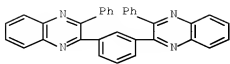
RN 213965-13-0 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-[4-(1,1-dimethylethyl)phenyl]-6,7-dimethyl- (9CI) (CA INDEX NAME)



RN 214132-58-8 CAPLUS

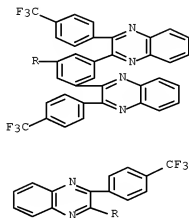
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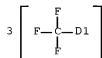
RN 214132-61-3 CAPLUS

CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[6(or 7)-(trifluoromethyl)-3-[4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



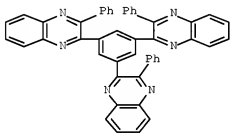
PAGE 2-A



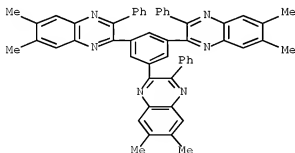
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 28 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:57735 CAPLUS Full-text
 DOCUMENT NUMBER: 128:210630

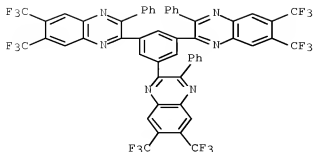
TITLE: Oxadiazoles and phenylquinoxalines as electron transport materials
 AUTHOR(S): Bettenhausen, J.; Greczmiel, M.; Jandke, M.; Strohmriegl, P.
 CORPORATE SOURCE: Universitat Bayreuth, Makromolekulare Chemie I and Bayreuther Institut fur Makromolekulforschung (BIMF), 95440, Bayreuth, Germany
 SOURCE: Synthetic Metals (1997), 91(1-3), 223-228
 CODEN: SYMEDZ; ISSN: 0379-6779
 PUBLISHER: Elsevier Science S.A.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 203915-06-4P 203915-07-5P 203915-08-6P
 203915-09-7P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation and characterization of oxadiazoles and phenylquinoxalines as electron transport materials for LEDs)
 RN 203915-06-4 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl- (CA INDEX NAME)



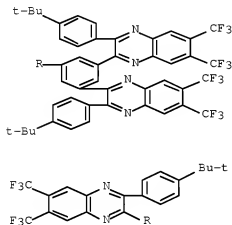
RN 203915-07-5 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[6,7-dimethyl-3-phenyl- (CA INDEX NAME)



RN 203915-08-6 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-phenyl-6,7-bis(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 203915-09-7 CAPLUS
 CN Quinoxaline, 2,2',2''-(1,3,5-benzenetriyl)tris[3-[4-(1,1-dimethylethyl)phenyl]-6,7-bis(trifluoromethyl)- (9CI) (CA INDEX NAME)

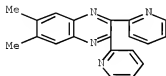


REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 29 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1997:491100 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 127:142617
 TITLE: Electro luminescent device and back-light and display using it
 INVENTOR(S): Himejima, Yoshio
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09188875	A	19970722	JP 1996-1464	19960109 <--

JP 3796787 B2 20060712
 PRIORITY APPLN. INFO.: JP 1996-1464 19960109
 OTHER SOURCE(S): MARPAT 127:142617
 IT 6627-38-9
 RL: DEV (Device component use); MOA (Modifier or additive use);
 USES (Uses)
 (electron transporter; high-luminance
 electroluminescent device for back-light and display)
 RN 6627-38-9 CAPLUS
 CN Quinoxaline, 6,7-dimethyl-2,3-di-2-pyridinyl- (CA INDEX NAME)



L6 ANSWER 30 OF 30 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1992:416862 CAPLUS Full-text
 DOCUMENT NUMBER: 117:16862
 ORIGINAL REFERENCE NO.: 117:2955a,2958a
 TITLE: Electroluminescent devices
 INVENTOR(S): Sakon, Yohta; Ohnuma, Teruyuki; Hashimoto, Mitsuru;
 Saito, Shogo; Tsutsui, Tetsuo; Adachi, Chihaya
 PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
 SOURCE: U.S., 59 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5077142	A	19911231	US 1990-511407	19900419 <--
PRIORITY APPLN. INFO.:			JP 1989-102057	A 19890420
			JP 1990-8006	A 19900116

OTHER SOURCE(S): MARPAT 117:16862
 IT 1684-14-6
 RL: DEV (Device component use); USES (Uses)
 (electroluminescent devices containing)
 RN 1684-14-6 CAPLUS
 CN Quinoxaline, 2,3-diphenyl- (CA INDEX NAME)

